CIRCUIT SYMBOLS

AC
current: voltage:

ALTERNISTOR
TRIAC
A TRIAC and
33 - 43v DIAC
Main Terminal1
Gate
Main Terminal 2

Ammeter
(amp meter)

AND Gate

AND Gate

Antenna
balanced

Antenna
Loop, Shielded

Antenna
Loop, Unshielded

Antenna
unbalanced

Attenuator, fixed
(see Resistor)

Attenuator, variable
(see Resistor)

Battery

Bilateral Switch
(DIAC)

Bridge Rectifier
(Diode Bridge)

BUFFER
(Amplifier Gate)

BUFFER
(Amplifier Gate)

Buzzer

Capacitor
feedthrough

Capacitor
non-polarised

Capacitor polarised
(see electrolytic)

Capacitor
Variable

Cavity Resonator

Cell

Circuit Breaker

Coaxial Cable

CRO – Cathode Ray
Oscilloscope

Crystal Microphone
(Piezoelectric)

Connectors
Plug
(male)
Jack
(female)
connected
Plug
(male)
(female)

Crystal
Piezoelectric

Darlington
Transistor
collector
base
emitter

DIAC
(Bilateral Switch)

DC
current: voltage:

Delay Line

Diode
k

Diode - Gunn

Diode - Light Emitting
(LED)

Diode
Photo Sensitive

Diode
Photovoltaic

Diode Bridge
(Bridge Rectifier)

Diode - Pin

Diode - Varactor

Diode - Zener

Earth
Ground

Earpiece
(earphone,
crystal earpiece)

Electroluminescence
el

Electret Microphone
(Condenser mic)

Electrolytic
(Polarised Capacitor)
alternate symbols:
(positive on top)

Electrolytic - Tanatalum
positive end
black band or
chamfer
106
10u tantalum

Exclusive-OR Gate
(XOR Gate)

Exclusive-OR Gate
(XOR Gate)
=1

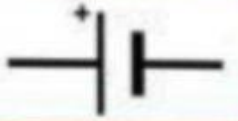
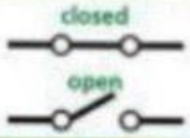
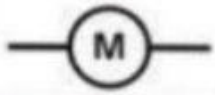
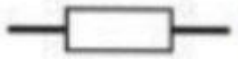
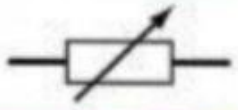
Field Effect
Transistor
(FET) n-channel
also: N-Channel J FET
Gate
Drain
Source

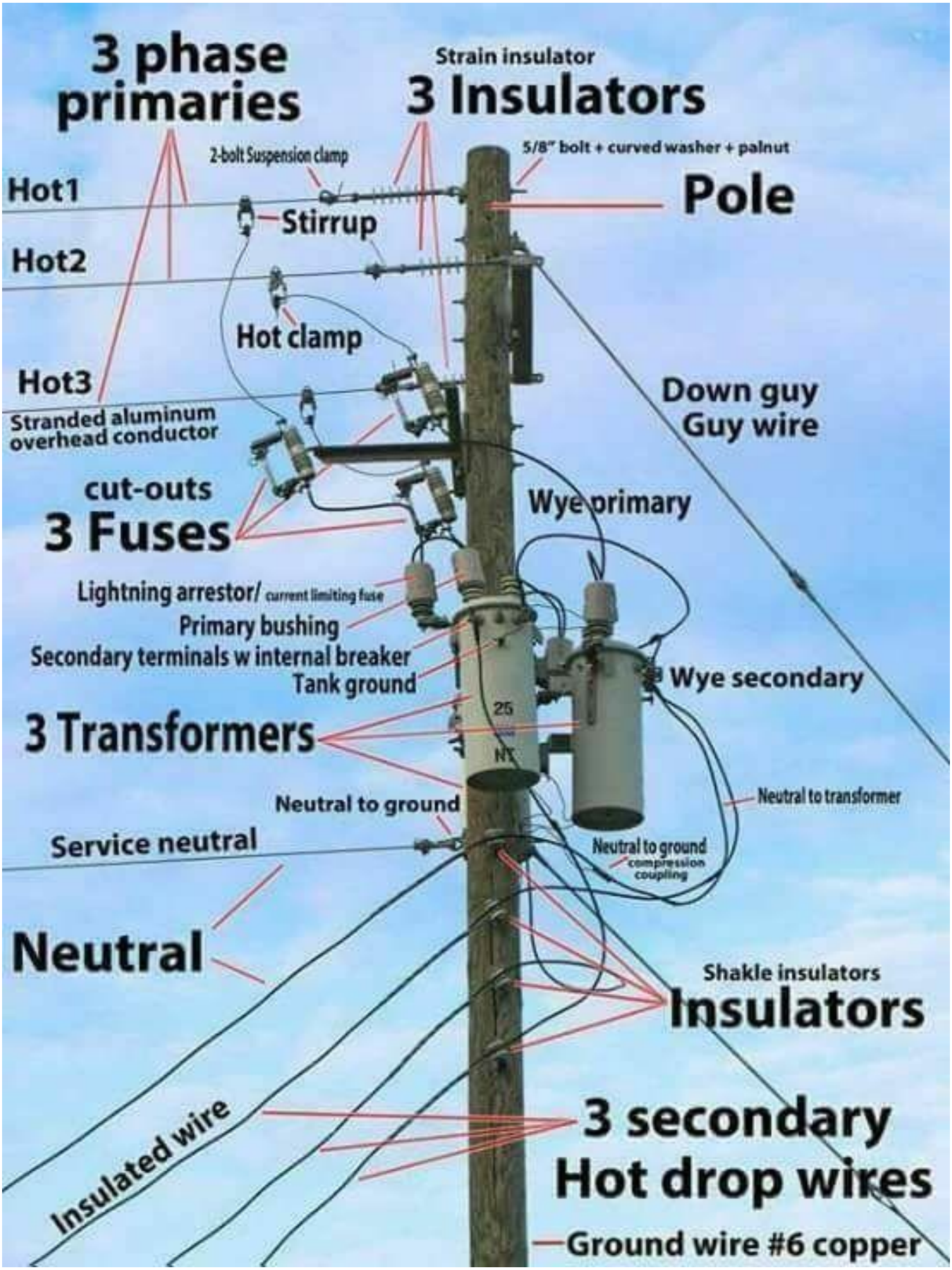
Field Effect
Transistor
(FET) p-channel
also: P-Channel J FET
Gate
Drain
Source

Flashing LED
(Light Emitting Diode)
(Indicates chip inside LED)

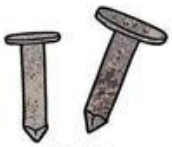
CIRCUIT SYMBOLS

Electrical circuit diagrams can sometimes look confusing.
Here is an explanation of the most commonly used symbols.

 Cell	A cell is a source of electrical energy.	
 Battery	A battery contains numerous cells connected so that they produce more electrical energy.	
 Bulb	A bulb will light up only when it is in a circuit that is complete.	
 Switch	A switch can be turned on (closed) to let current flow or turned off (open) to stop current flow.	
 Motor	A motor turns current into motion, for example, in a hair dryer.	
 Buzzer	A buzzer turns current into sound.	
 Ammeter	An ammeter is used to measure current.	
 Fixed Resistor	A fixed resistor controls the amount of current in a circuit.	
 Variable Resistor	A variable resistor can be adjusted to control the amount of current in a circuit.	

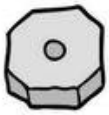

3 phase primaries
Strain insulator
3 Insulators
2-bolt Suspension clamp
5/8" bolt + curved washer + palnut
Hot1
Pole
Stirrup
Hot2
Hot clamp
Hot3
Down guy
Guy wire
Stranded aluminum overhead conductor
cut-outs
3 Fuses
Wye primary
Lightning arrestor/ current limiting fuse
Primary bushing
Secondary terminals w internal breaker
Tank ground
Wye secondary
3 Transformers
Neutral to ground
Neutral to transformer
Service neutral
Neutral to ground compression coupling
Neutral
Shakle insulators
Insulators
Insulated wire
3 secondary
Hot drop wires
Ground wire #6 copper

TOOLS & EQUIPMENT



NAILS

BOLT



NUT

SCREWS

MALLET

HAMMER

SPIRIT LEVEL

POCKETKNIFE

SCREWDRIVER

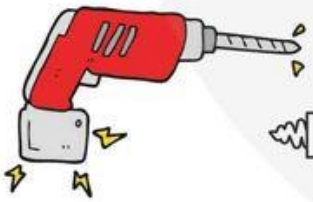
BRADAWL

WRENCH

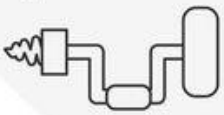
ADJUSTABLE WRENCH

PIPE WRENCH

A PAIR OF SCISSORS



CORDLESS DRILL



BRACE

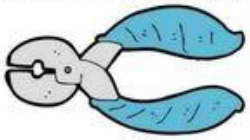
ELECTRIC DRILL

CORKSCREW

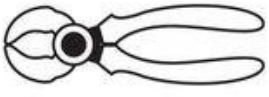
CAULKING GUN

LINEMAN'S PLIERS

NEEDLE NOSE PLIERS



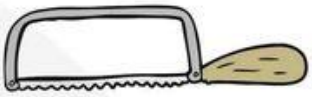
DIAGONAL PLIERS



SLIP JOINT PLIERS

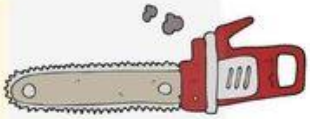
HANDSAW

BACKSAW



COPING SAW

HACKSAW



CHAINSAW

TOOLBOX

TAPE MEASURE

PLUNGER

STEPLADDER