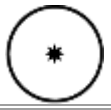
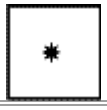
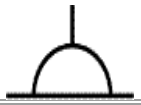
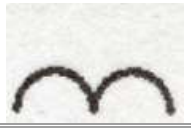
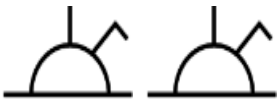
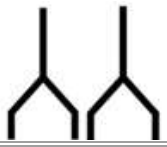
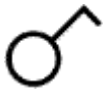
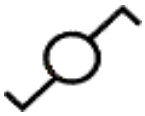
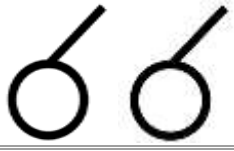
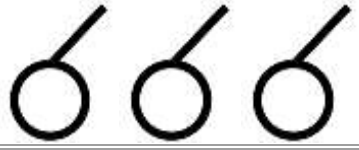
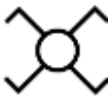
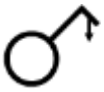
+2347037689917
chiatechwaecpractice@gmail.com
waecsolarpv.chiatechsolutions.com

Basic Electrical Symbols

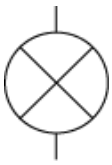
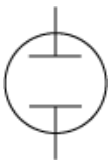
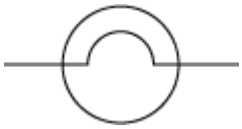
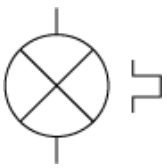
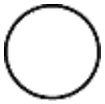
Location Symbols for General Installations	
	**Machine, general symbol** *** Function etc.**
	**Load, general symbol** *** Details**
	**Motor starter, general symbol** *** Indicates type etc.**
	**Socket-outlet, general symbol**
	**Twin Socket-outlet, general symbol**
	**1 gang un switched socket-outlet**
	**2 gang un switched socket-outlet**
	**1 gang switched socket-outlet**
	**1 gang switched socket-outlet**

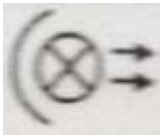
Location Symbols for General Installations	
	2 gang switched socket-outlet
	2 gang switched socket-outlet
	Connection unit – fused as specified
	Switched connection unit – fused as specified
	Switch, general symbol
	Switch, general symbol double pole
	1 gang 1 way switch
	1 gang 2-way switch
	2-way switch, single pole
	2 gang switches

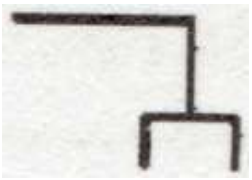
	3 gang switches

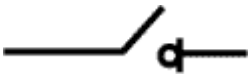
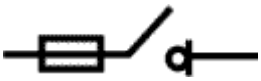
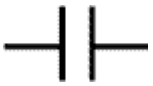
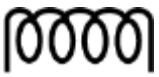
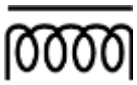
Location Symbols for General Installations	
	Dimmer switch
	Intermediate switch
	Intermediate switch
	Pull switch, single-pole
	Push button
	Push button with neon indicator
	Clock, general symbol
	Time switch
	Time clock

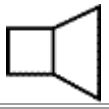
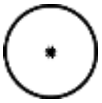
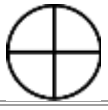
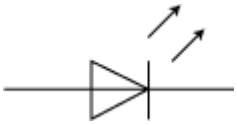
	Key operated switch
	Cooker control unit

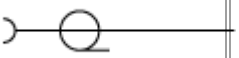
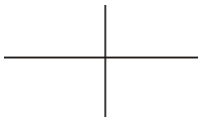
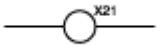
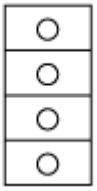
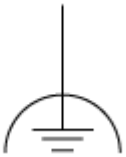
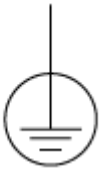
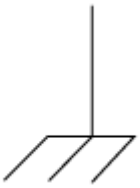
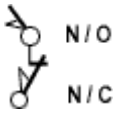
Location Symbols for General Installations	
	Thermostat
	Bell (Audible)
	Buzzer (Audible)
	Siren (Audible)
	Horn
	Telephone handset, general symbol
	Lamp (Standard)
	Lamp Standard
	Filament Lamp
	Lamp (Flashing)
	Lighting outlet position - general symbol

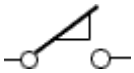
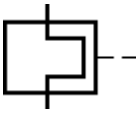
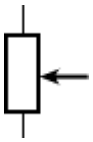
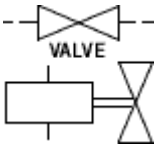
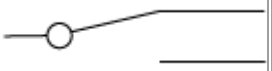
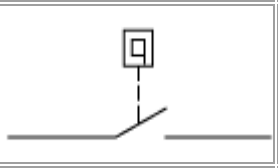
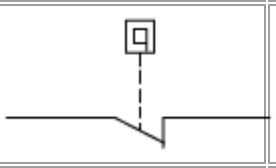
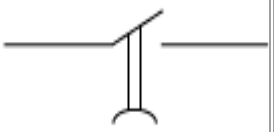
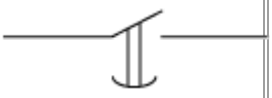
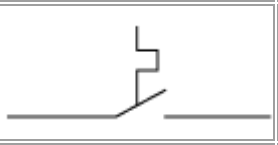
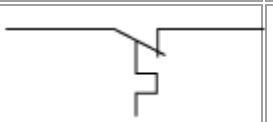
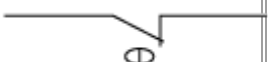
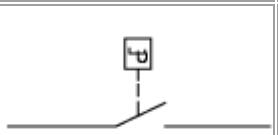
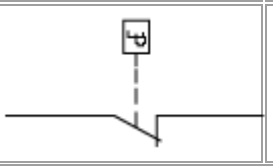
Location Symbols for General Installations	
	Fluorescent luminaire (rows indicate number of tubes)
	Wall mounted luminaire
	Self - contained emergency lighting luminaire
	Emergency lighting luminaire (or special circuit)
	Spot light
	Flood light
	Wall mounted fitting
	Socket outlet (power) with isolating transformer – eg shaver outlet
	Water heater
	Extract fan

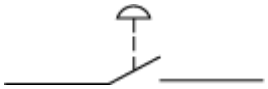
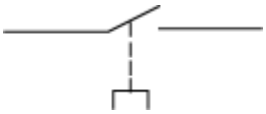
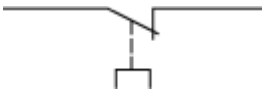
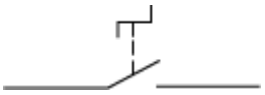
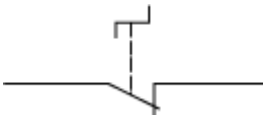
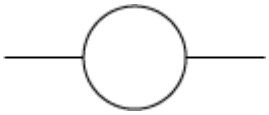
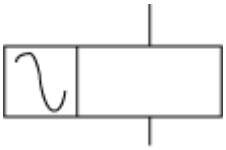
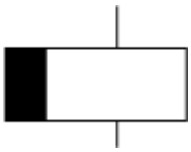
Location Symbols for General Installations	
	Projector general symbol
	Distribution board or consumer unit
	Connection or junction box
	Socket Outlet (telecommunications) **General Symbols** Designated as follows: TP - Telephone M - Microphone FM - Frequency Modulation TV - Television TX - Telex  - Loudspeaker

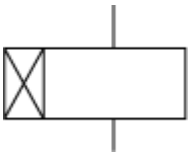
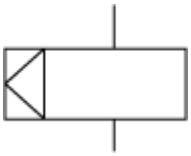
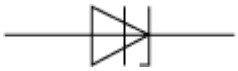
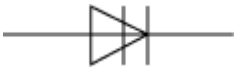
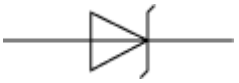
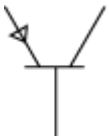
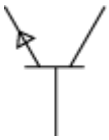
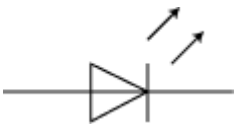
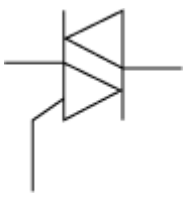
Common Schematic Drawing Symbols	
	Switch
	Switch- fuse
	Fuse-switch
	Isolator (Disconnector), general symbol
	Disconnector - fuse (fuse combination unit)
	Fuse - disconnector
	Switch - disconnector
	Switch - disconnector - fuse (fuse combination unit)
	Fuse - switch - disconnector
	Capacitor, general symbol
	Inductor, coil, winding or choke
	Inductor, coil, winding or choke with magnetic core
	Semi Conductor Diode - general symbol

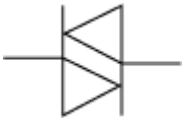
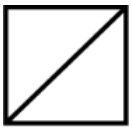
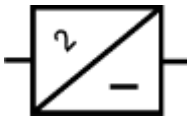
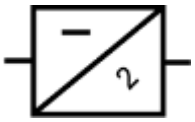
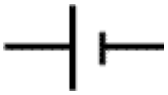
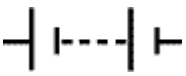
Common Schematic Drawing Symbols	
	**Microphone**
	**Loudspeaker**
	**Antenna, general symbol**
	**Machine, general symbol** *** Function M=Motor G=Generator**
G	**Generator, general symbol**
	**Indicating instrument, general symbol** *** Function V = Voltmeter A = Ammeter etc.**
	**Integrating instrument or Energy meter** *** Function Wh = Watt-hour** **VArh = Volt ampere reactive hour**
	**Lamp, or signal lamp, general symbol**
	**Light Emitting Diode (LED)**

Common Schematic Drawing Symbols			
	Plug Male		Socket (plug female)
	Coax Plug Male		Slow Operating Relay - Delay On
	Wire Connections (Two Wires)		Wire Connections (crossed)
	Wires Crossing (Not Connected)		Terminal Connector
	Terminal Block		Earth Connection
	Noiseless Earth		Protective Earth
	Chassis Earth		Equipotentiality
	Ammeter		Voltmeter
	Circuit Breaker		Selector Switch (N/O) Normally Open (N/C) Normally Closed
	Contactor (N/C)		Contactor (N/O)

Common Schematic Drawing Symbols			
	Limit Switch		Thermal Overcurrent
	Mechanical Interlock		Voltage Transformer
	Potentiometer		Solenoid Valve
	Normally open Contact (N/O)		Normally Closed Contact (N/C)
	Change Over or 2-way Contact Made position		Fused Switch Open Contact (N/O)
	Limit Switch (N/O)		Limit Switch (N/C)
	Flow Switch (N/O)		Flow Switch (N/C)
	Time Delay (N/O) Delay on Closing		Time Delay (N/O) Delay on re-opening
	Thermal Switch - Overload (N/O)		Thermal Switch - Overload (N/C)
	Temperature Switch (N/O)		Temperature Switch (N/C)
	Pressure Switch (N/O)		Pressure Switch (N/C)

Common Schematic Drawing Symbols	
	Normally Open PB (N/O)
	Normally Closed PB (N/C)
	Emergency Stop PB (N/O) Indication Contact
	Emergency Stop PB (N/C)
	Pull Switch (N/O)
	Pull Switch (N/C)
	Turn/Rotary Switch (N/O)
	Turn/Rotary Switch (N/C)
	Contractor Coil
	Relay with AC Supply
	Slow-Release Relay Delay Off
	General Relay (DC Supply)

Common Schematic Drawing Symbols	
	Slow Operating Relay Delay On
	Mechanically Latched Relay
	Diode
	Diode Reverse Conducting
	Diode Reverse Blocking
	Zener Diode
	Transistor (PNP)
	Transistor (NPN)
	Light Emitting Diode (LED)
	Capacitor
	Bidirectional Triode Thyristor (Triac)

Common Schematic Drawing Symbols	
	Diac
	Three-phase winding - Star
	Changer, general symbol Converter, general symbol Notes: (1) If the direction of change is not obvious, it may be indicated by an arrowhead on the outline of the symbol. (2) A symbol or legend indicating the input or output quantity, waveform etc. may be inserted in each half of the general symbol to show the nature of change.
	Rectifier
	Inverter
	Primary cell - longer line positive, shorter line negative
	Battery
	Fuse link, rated current in amperes