

**TOTAL**

**powerbox<sup>®</sup>**

**SOLUTION, INC.**



CERTIFICATION  
INTERNATIONAL

ISO 9001:2008  
CERTIFIED COMPANY

**AUTOMATIC  
TRANSFER  
SWITCH**

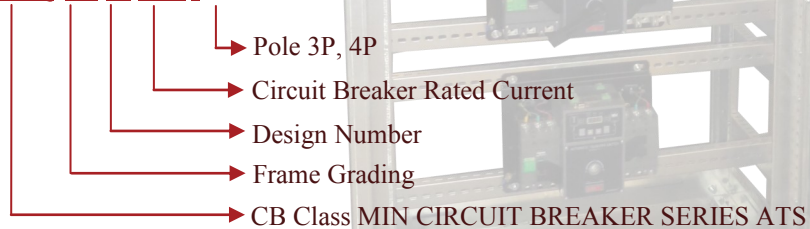
## ATS Installation Procedure

YEQ2 Series intelligent dual power automatic switches is made up of two units in 3 pole and 4 pole of MCCB and (auxiliary contact, alarm contact) the mechanical interlocking transmission, intelligent controller and other components. It has the integral style and split type with two kind of mechanism. Integral controller is equipped with a base and executing agencies; Split type is intelligent controller installed in the panel. User takes the base by implementing agencies to install into the cabinet controller with about 2m cables.

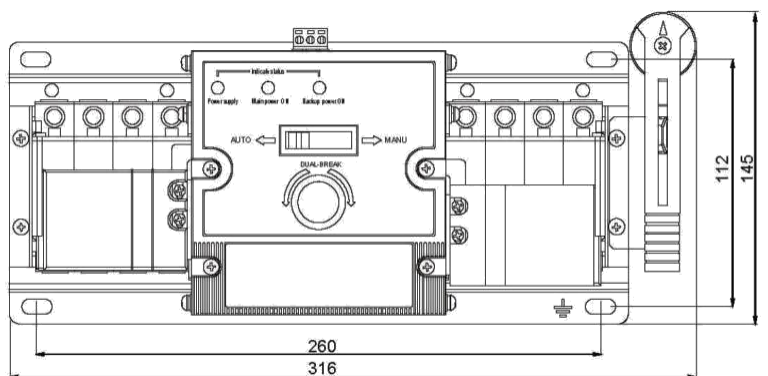
- Reliable mechanical interlock between the two circuit breakers and electrical interlock device. Prevents the two devices closing completely at the same time.
- SCM intelligent controller used to control the core hardware is simple and powerful, expansion of convenience and high reliability.
- It has a short circuit, over load protection functions, over voltage, under voltage, loss phase automatic transfer function and intelligent alarm function.
- Automatic switching external parameters can be set.
- Operation of intelligent motor protection.
- The control circuit device with fire, fire control center to control signal into intelligent controller. Two sets circuit breaker will enter a staling of breaking.
- There is a computer network interface for achieving remote control four remote telemetry functions.
- YEQ1 Series (terminal type) (economic type) - Automatic Transfer Switches, is to be terminated to the dual electrical power switching devices;
- Small in volume, simple in constitution;
- There is provided 3P, 4P. Easy to operate;
- Transfer switch drives by single motor, a smooth, no noise, and the impact is small;
- With mechanical interlocking and electrical interlock, change over credibility, could be supply by manual or automatic operation;
- Common spare circuit breaker rated current can be different;
- A.T.S. contains connector for wiring use that reflects breaker state;
- A.T.S. panel shows various instruction, separation instruction manual, automatic and wiring diagram and so on.

## Model and Meaning

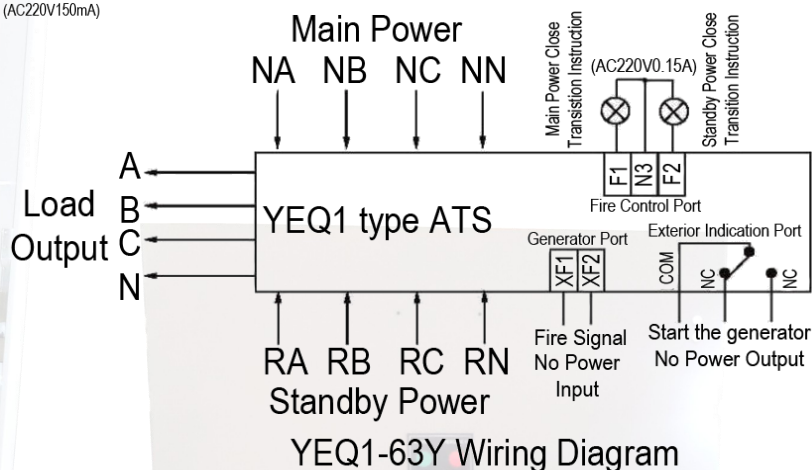
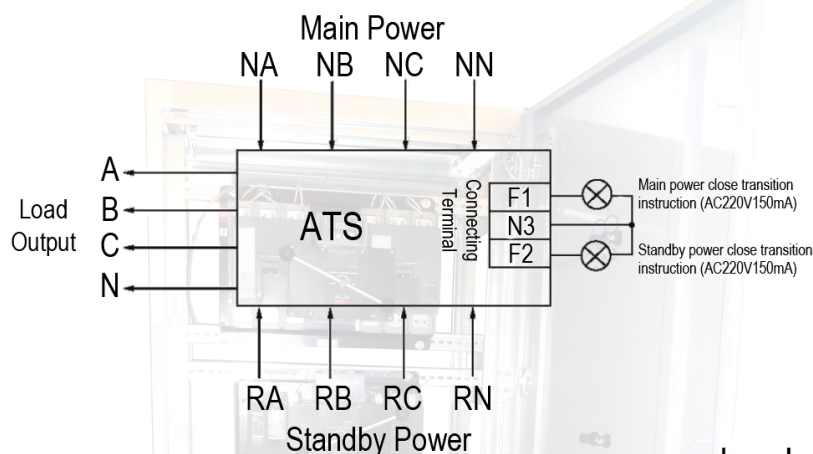
YEQ 63 □ □ A / □ P



## YEQ I -63X, YEQ I -63Y Automatic Transfer Switch Overall and Installation Dimensions



## YEQ1-63X, YEQ1-63Y Series Wiring Diagram



### Use of Operate and Support

- Whether main power or back up power with voltage or not, all can be by manual mode operated. Under manual put the auto-manual button to manual position, pull the handle by clockwise to end, backup power implementation circuit breaker Qr is OFF, implementation of main power supply circuit breaker Qn ONg; When pull handle counter clockwise to the end, the implementation of backup power source Qr is ON, implementation of MAIN power supply circuit breaker Qn is OFF;
- Set the auto position, if the MAIN power is normal ATS will transfer to MAIN power. The MAIN POWER indication will be lit; if the MAIN power in unusual the ATS will transfer to backup power. The backup indication power will be lit.
- ATS has 1A of two unit fuses and an electric connector, fuse as a short circuit protection in automatic controller. Electric connects as dry contact in indication light to panel of controller box, voltage of 220V AC, 150mA. For more details please refer to the instruction.

### Fault Analysis and Removal

When the ATS is under automatic control state, the power condition was changed and the operation mechanism has no action; such as MCB can't close-transition or open-transition should be checked.

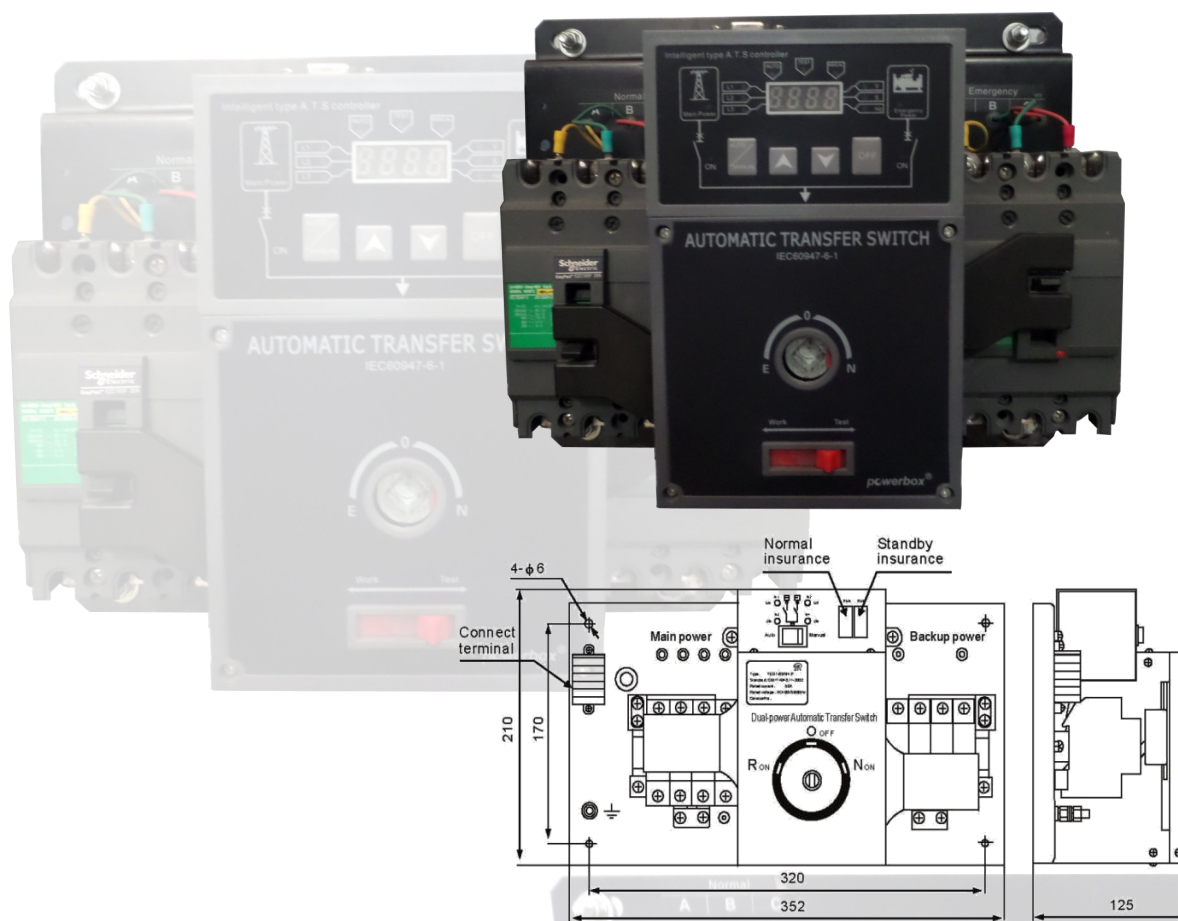
1. Whether the power grid was failed
2. Whether the wiring was shedding
3. Whether the fuse itself was burning. If the front point of one circuit breaker has electricity, the connection and the wiring are both well, fuses are intact but yet, cannot closed-transition or open-transition. Ask the professionals or the manufacturer/ supplier.

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## YEQ I -63 Terminal Type A.T.S.



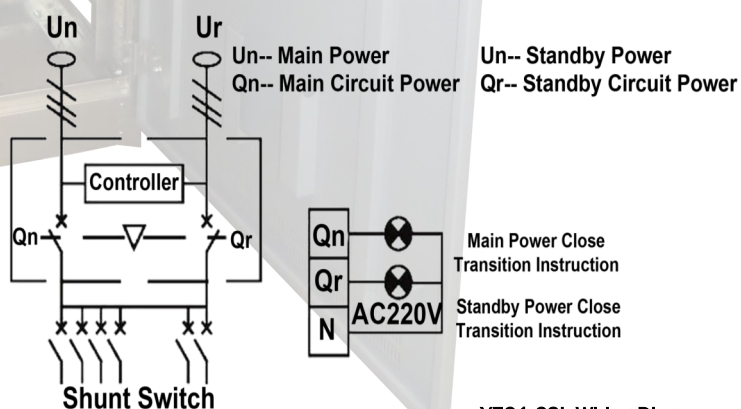
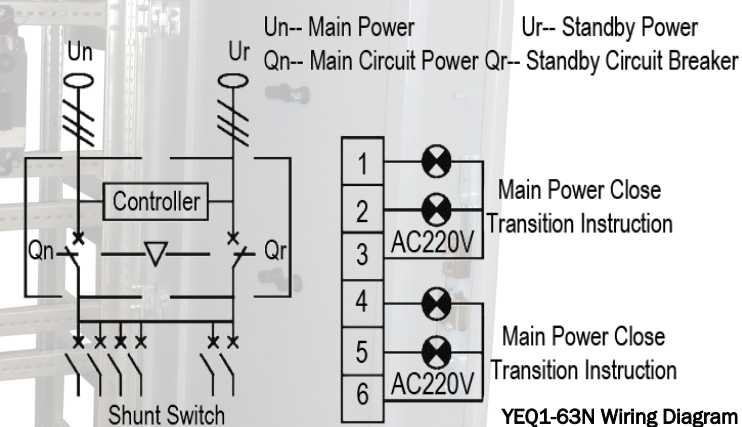
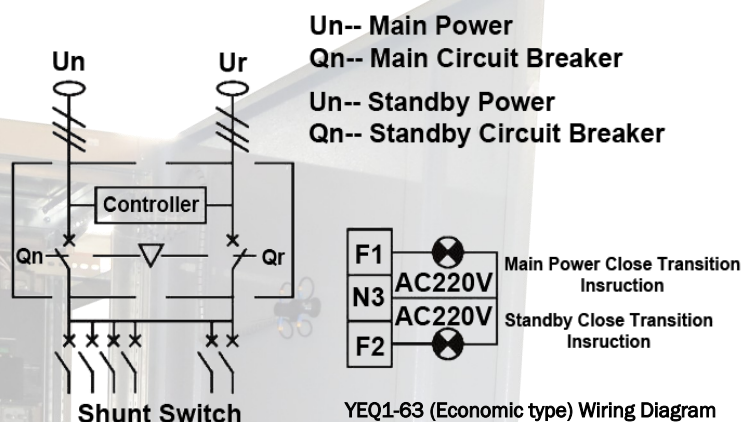
### YEQ I Technical Parameter of YEQ I Type A.T.S.

Poles	Rated Voltage U <sub>e</sub> (V)AC	Rated Current I <sub>n</sub> (A)AC	Frequency (Hz)	Control Voltage (V)	Transfer Time	Mechanical Life (Times)
3P	380V	6,10,16	50/60	220V	1.5-3s	10000
4P		20,25,32 40,50,53				

### Working Principle

When common source is normal, the functional key is at the position “auto” reserve breaker is open and common breaker is closed to protect common source for connecting with load, the common power voltage indicator will be lit. When the common source fails (the voltage is lower than 60% of rated voltage) the common source will transfer to reserve source automatically, the reserved source voltage indicator is ON. After removing the failure of the common source, this switch will transfer automatically to the common source.

## YEQ I Series A.T.S. Wiring Diagram



Note: Use correct wire size for input electric connector of 2 units MCB well. Putting the line-phase sequence should be unanimous. When 3 phase MCB is used add the neutral switch neutral N as well.

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## General Introduction

YEQ2 series automatic transfer switch is the best development of the company generation products. Mostly used to monitor the power supply circuits. When main power failure, it will change over to backup power by automatically, thus completing the transformation of power system. At present, in particular suited for the important electricity power places where disallow to failure, in order to meet the needs of the scene. Automatic switch has self-input and self-recover, self-input without self-recover, utility to utility, utility-generators work with a variety functions, the product applied in 220V, AC 50Hz, rated current from 10A to 1250A (CB class) automatically switch products.

## Structure and Features

YEQ2 Series intelligent dual power automatic switches is made up to two units in 3 poles and 4 poles of MCCB and (auxiliary contact, alarm contact), the mechanical interlocking transmission, intelligent controller and other components. It has the integral style and split type with two kind mechanisms. Integral controller is equipped with a base and executing agencies; Split type is intelligent controller installed in the panel. User takes the base by implementing agencies to install into the cabinet controller with about 2m cable.

- Reliable mechanical interlock between the two circuit breakers and electrical interlock device. Eliminate the two devices closing completely at the same time.
- SCM intelligent controller used to control the core hardware is simple and powerful, expansion of convenience, high reliability.
- It has short circuit, over load protection functions, over voltage, under voltage, loss phase automatic transfer function and intelligent alarm function.
- Automatic switching external parameters can be set free.
- Operation of intelligent motor protection.
- The control circuit devices with fire, fire control center to a control signal into intelligent controller. Two sets circuit breaker will enter a stating of breaking.
- There is a computer network interface for achieving remote control four remote telemetry functions.



## Product Model and Meaning

YEQ 2 C D 100 -63 /3 R

- R = Auto transfer and auto (network...network)
- S = Auto transfer and non-auto transfer (network...network)
- F = network...generator
- Poles: 2P, 3P, 4P
- Circuit Breaker Rated interruption Current
- Frame Class
- Controller
- Intelligent type (show power voltage, startup generate, Fire Linkage)
- Circuit breaker
- Schneider (NS, C65)
- Design Serial No.
- CB Class Type

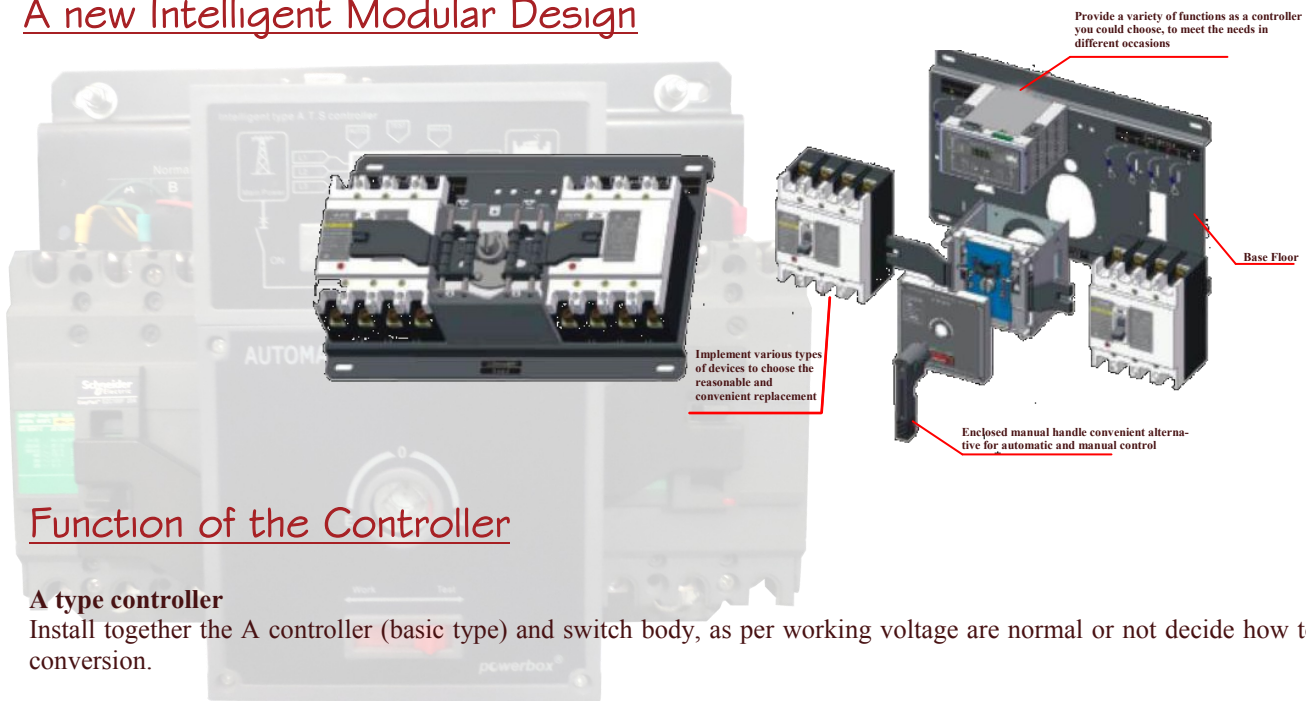
MCCB

Beauty in Appearance, Reliable in Quality, Long Life, and Easy to Operate





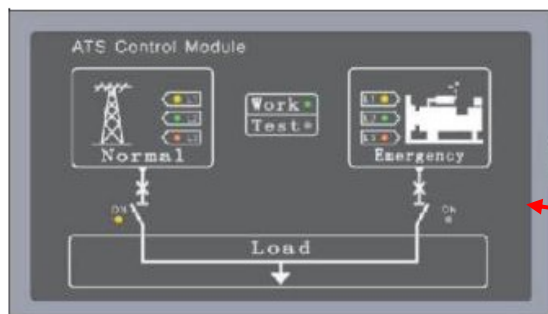
## A new Intelligent Modular Design



## Function of the Controller

### **A type controller**

Install together the A controller (basic type) and switch body, as per working voltage are normal or not decide how to work conversion.



**A type Controller**



## Function

- Alternative work by automatic and manual operation
- Monitoring the two sources, whether it is loss phase, under voltage, loss voltage and such abnormal conditions the indication shows and whether in location to normal voltage.
- Conversion type is Self-input and self recover.

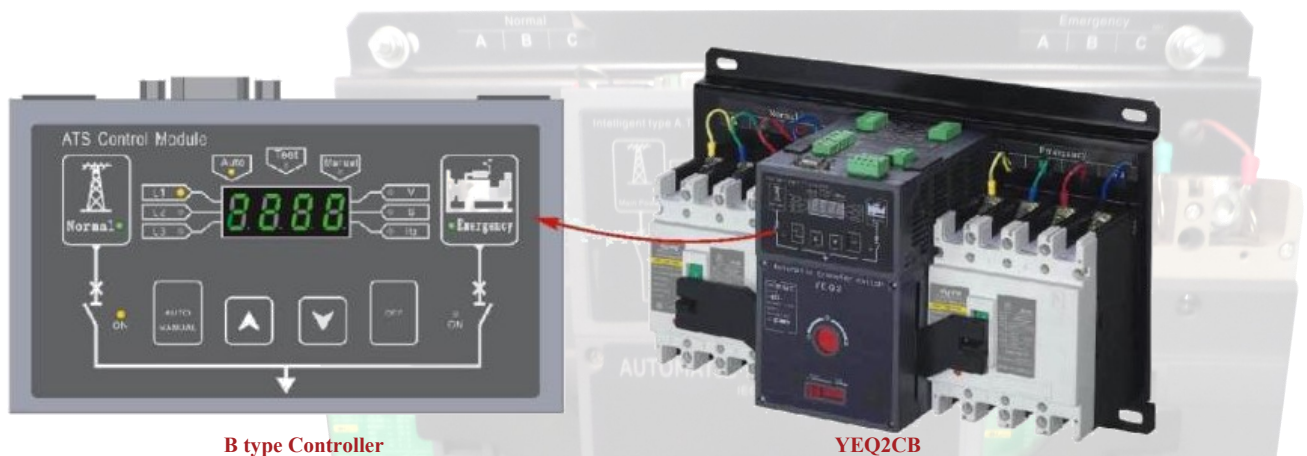
## Electric performance

- Rated working voltage
- Transfer delay time;0.5s



## B type controller

B type controller is adopting the microprocessor's program control, linking switches body together, easy to operate, powerful function, and increased C controller and D type LCD display fission controller on the basis of the B model controller.



## Function

- Accurately shows two way three phase voltage, frequency and switch state capacity in two sources;
- Allow user to monitor the scene, the control center to amend the parameter of working status and transfer delay time.
- Set arbitrarily self-input and self recover, utility-generator models
- Fire Alarm linkage conversion to 0
- Manual and Automatic conversion mode alternative function
- Under the utility-generator model with a send off signal to generator
- Conversion and delay time can be set arbitrarily
- With a strong anti-jamming capability, suitable for the strong electromagnetic interference using in a complex environment.

## Electronic Performance

- Working Voltage : AC220V/ 50Hz
- Transfer delay time : 0.5s-90s continuous adjustable
- Return delay time : 0.5s-90s continuous adjustable
- Lock transfer voltage value : 230V-300V continuous adjustable
- Transfer time : not more than 4s

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## C type and D type Controller

- If the user is required to conduct a separate controller, choose C or D model controller to install in panel cabinet, through 2m serial data cable link. B model controller on switch body, all operations and display functions are all in forbidding state (switch body display is switched off automatically) external controller is starting to work, users could observe the ATS control of the switch running status through the external controller when they can't open the cabinet.



## C type controller character and function

- Adopt digital and indicator status, two state voltage and frequency. Though button choose the manual transfer mode and set parameters

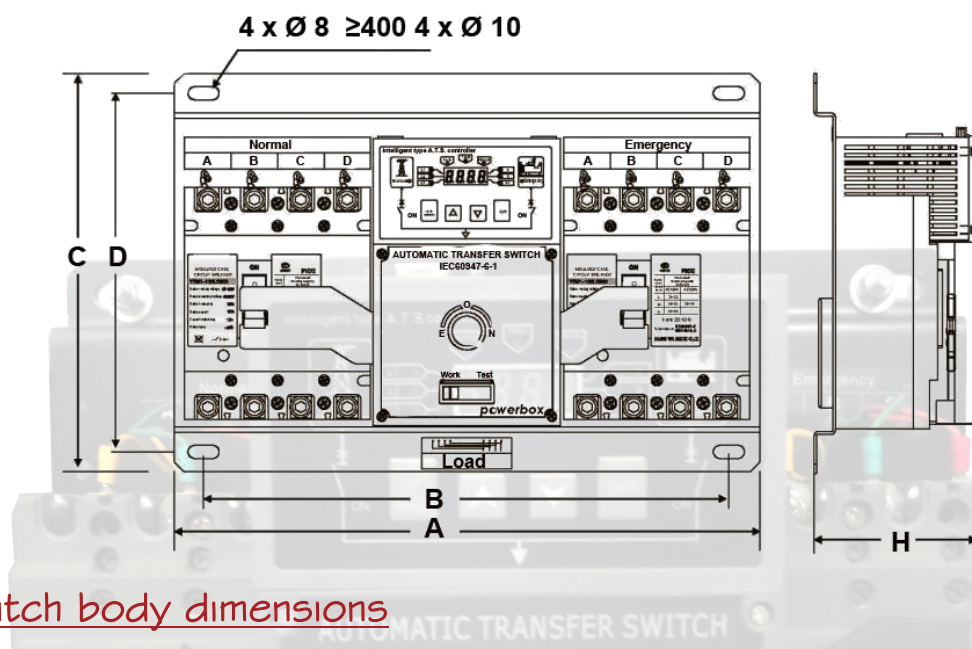
## D type controller character and function

- Using the dot-matrix LCD screen display and shows voltage and frequency in two sources
- Press the key to operate the manual transfer mode and set the parameters.



## Appearance and installation dimensions

### **The appearance of ATS switch body**



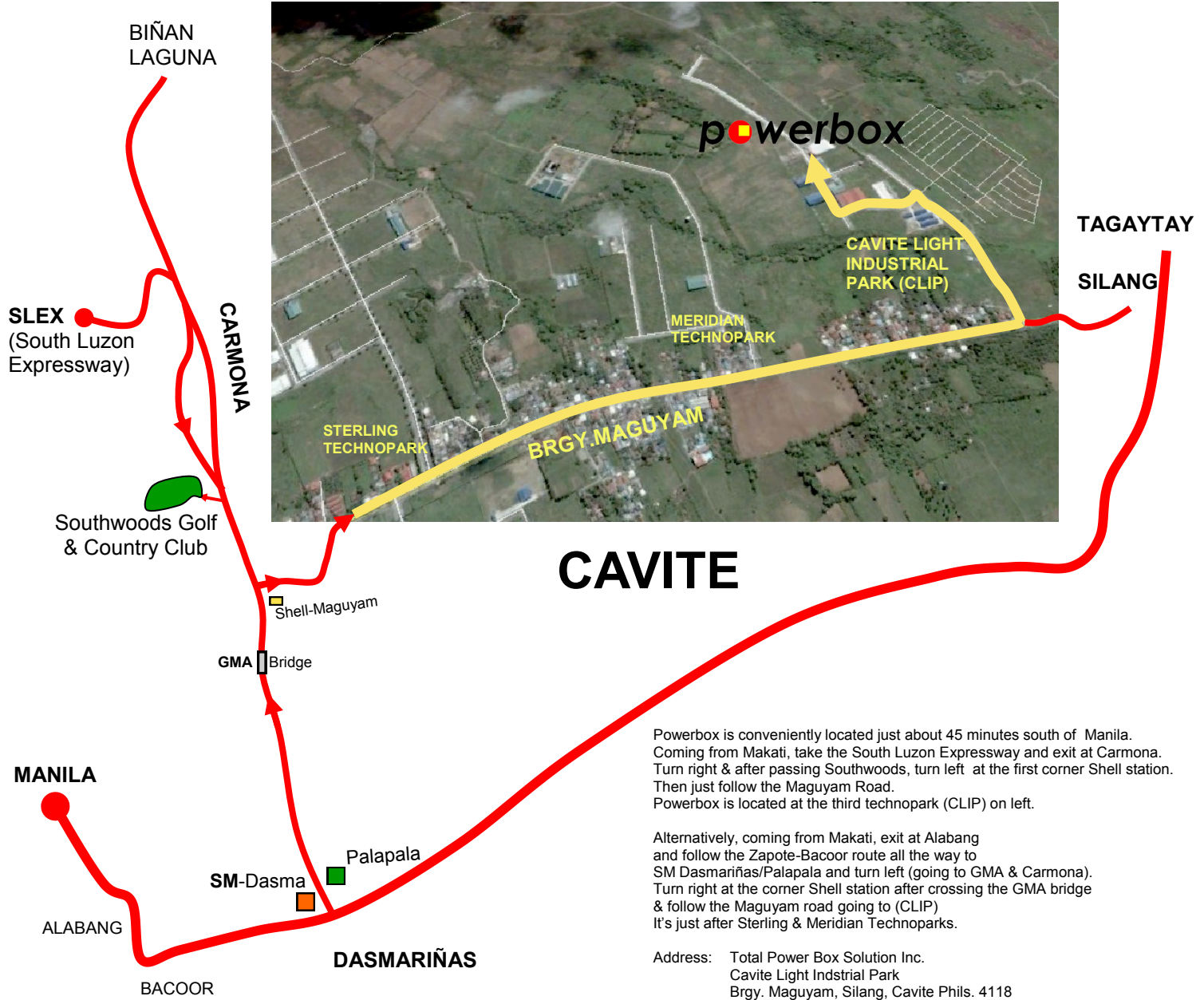
### ATS switch body dimensions

Specifications	A		B		C	D	H
	3P	4P	3P	4P			
YEQ1C-63	285	320	245	280	255	230	141
YEQ1N-63	285	320	245	280	255	230	141
YEQ1P-63	285	320	245	280	255	230	141
YEQ2C-63	305	355	265	315	255	230	141
YEQ2C-100	335	395	295	355	255	230	141
YEQ2C-225	365	435	325	395	255	230	155
YEQ2C-400	491	587	431	527	330	300	215
YEQ2C-630	524	640	464	580	330	300	215
YEQ2C-800	580	720	520	660	340	310	215
YEQ2C-1250	580	720	520	660	415	385	290
YEQ2N-250	355	425	315	385	255	230	148
YEQ2N-630	497	587	437	527	355	325	215
YEQ2P-125	305	355	265	315	255	230	155
YEQ2P-160	335	395	295	355	255	230	155

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# MANUFACTURING PLANT LOCATION



## Authorized Distributor:

Call us on our: \_\_\_\_\_

- Customer Care Service Hotline  
Tel: (02) 806-9716  
(046) 686-5446
- Technical Service Hotline  
Mobile: 0922-874-5355  
0922-811-8120  
0922-812-3619

[www.powerboxsolutions.com](http://www.powerboxsolutions.com)

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