# ELECTRICAL SUBSTATION EQUIPMENT





















Ark Power Ltd. (APL) is a professional manufacturer of Electrical & Electronics equipment with proven design. APL boasts a highly professional R&D team comprising senior Engineers & experienced technologist which enables the company to apply the most advanced technologies to its production of high performance Sub-Station equipment. The company is committed to meeting requirements from all kinds of customer, re-designing and tailor—making its products.

APL products are well-known on the market and have been widely meet with the requirement in such fields as all types of Industries, Apartments, Defense, Bangladesh Power Development Board (BPDB), Dhaka Electric Supply COMPANY (DESCO), Dhaka Power Distribution Compnay (DPDC) & Rural Electrification Board (REB).

#### **Transformer**

APL Transformers are naturally self cooled or forced air/oil cooled, suitable for outdoor or indoor, core type or shell type both for single phase/three phase. Our Transformers are of rated voltage 11/0.415KV, 6.35/0.24 KV & 11/0.24 KV have passed the impulse withstand voltage test successfully at Bangladesh University of Engineering & Technology (BUET).

## Capacity:

- 1 Phase, up to 150 KVA, 50Hz
- 3 Phase, 50KVA to 10,000KVA, 50Hz

## **System Voltage:**

Generally 11/0.415KV, 6.35/0.24KV, 11/0.24KV & 33/0.415KV As per customer requirement

#### Standard:

Manufactured & Tested as to IEC-76, BS-171, ANSI, C57.12 or VDE-0532

#### **Accessories:**

- High/Low Tension Bushing with connectors
- Radiator
- Temperature meter
- Earthing bolts

- Tap Changer (Off load / On load)
- Oil level indicator
- Silicagel breather
- Drain valve

- Conservator
- Lifting lug
- · Name plate with connection diagram
- Bucholz relay for higher capacity

# **High Tension Switchgear:**

APL High Tension Switchgear equipped with Minimum Oil Circuit Breaker (MOCB), Vacuum Circuit Breaker (VCB) & Load Break Switch (LBS) and confirm to IEC, BS, VDE, DIN & ANSI standard. They are designed in co-ordination to over voltage due to Lightning & transients for highest system voltage of 12 KV & current rating from 630A to 1250A.

The panel boards are made of strong sheet steel at all sides with iron angles & channels welded together. They are painted in accordance with general practice and recognized methods to meet the tropical conditions at site. Potential transformer (PT), Current Transformer (CT), Earthing Switch, the main unit & other components are imported from America, Germany, France, Italy, UK & Japan or as per the choice of the valued customers.



# **Technical Information of HT Switchgear:**

Item	VCB			LBS			
Model	NTVHT630	APVHT800	APVHT1200	APLHT630	APLHT800	APLHT1200	
Rated Voltage (KV)	12	12	12	12	12	12	
Rated Current (A)	630	800	1200	630	800	1200	
Short Time Current (KV)	25	25	25	25	25	25	
Basic Impulse Level (KV)	75	75	75	75	75	75	
Making Current (KV)	50	50	50	50	50	50	
Site Amplitude (<)	1000M	1000M	1000M	1000M	1000M	1000M	
Dimensions (L×W×H) cm	100×90×200	100×90×200	100×90×200	90×90×200	90×90×200	90×90×200	



## Low Tension (LT) Switchgear:

APL Low Tension Switchgear (415V,  $3\phi$ , 50Hz) equipped with Circuit Breaker, Hard Drawn Electrolytic Copper Busbar, Ammeter, Voltmeter, Selector Switch & Indicating Lamps & confirm to IEC-947-2, BS, DIN & ANSI standard. Totally enclosed the cubicle will be painted with corrosion, chemical resistant & anti rust paint panels are designed to withstand the mechanical & thermal stress produced by current. All live parts are adequately protected against accidental touching. Interior wiring with minimum cross sectional area of  $0.75 \text{mm}^2$  is accommodated in plastic conduits.

The LT panel boards are so designated that the cables are fed in and split and removable type to facilitate cable entry having cable grommet.

Our overseas partners are the world most advanced and reliable manufacturer and the components are shipped from Germany, America, France, Italy, UK & Japan or as per our valued customer's requirement.



## **Power Factor Improvement Plant:**

APL Factor Improvement Plant conforming to IEC-439-2, VDE, DIN & ANSI standards is of sheet steel clad, dust & vermin proof, free standing, floor mounting indoor type. The centrally controlled automatic PFI plant is of compact design and suitable for operation in 06/09/12 steps in the system for automatic control of the reactive power.

The control unit is an integral part of the PFI plant comprising of Current Transformer of adequate rating Automatic Power Factor Correction Relay to keep the power factor almost constant at 0.99 & independent of load fluctuations having in built digital power factor meter, indicating lamps, ON/OFF switches, switching step indicators etc are included. It also has an option of manual control of power factor at a target value.

All components are shipped from Germany, America, France, Italy, UK & Japan or as per our valued customer's requirement.



## **Technical Information of Power Factor Improvement Plant:**

Model	Capacity	Rated Voltage	Over Current	Switching Step	CT Ratio	
APPFI40	40KVAr	415V	1.3×ln	4	60/5A	
APPFI60	60KVAr	415V	1.3×ln	5	100/5A	
APPFI80	80KVAr	415V	1.3×ln	5	150/5A	
APPFI100	100KVAr	415V	1.3×ln	6	150/5A	
APPFI125	125KVAr	415V	1.3×ln	5	200/5A	
APPFI160	160KVAr	415V	1.3×ln	5	250/5A	
APPFI200	200KVAr	415V	1.3×ln	6	320/5A	
APPFI250	250KVAr	415V	1.3×ln	5	400/5A	
APPFI300	300KVAr	415V	1.3×ln	6	500/5A	
APPFI400	400KVAr	415V	1.3×ln	6	600/5A	
APPFI500	500KVAr	415V	1.3×ln	6	800/5A	
APPFI600	600KVAr	415V	1.3×ln	9	1000/5A	
APPFI800	800KVAr	415V	1.3×ln	12	1250/5A	
APPFI1000	1000KVAr	415V	1.3×ln	10	1600/5A	

#### Warranty:

We cover warranty for a period of 18 (eighteen) months from the Date of Delivery on the performance of our manufactured equipment for any defect of technical & materials.

#### **Post Sales Service with Installation:**

We cover warranty for a period of 18 (eighteen) months from the Date of Delivery on the performance of our manufactured equipment for any defect of technical & materials.

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