



# ADVANCE SWITCHGEAR CO.

*....excellence in technology*

An ISO 9001 : 2008 Certified Company

ENGINEERING BRILLIANT SOLUTIONS



LOW VOLTAGE PANEL BUILDERS &  
PUNJAB GOVT. APPROVED 'A' CLASS ELECTRICAL CONTRACTOR



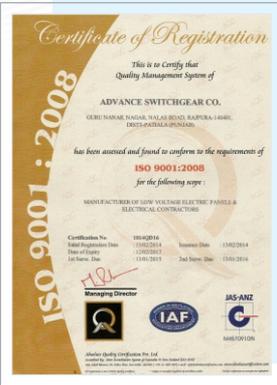
JAS-ANZ



# Schneider Electric



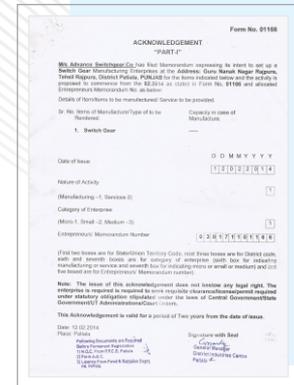
Reg. No. 101QD16



ISO CERTIFICATE  
REG. NO. 101QD16



CPRI  
SHORT CIRCUIT  
TEST CERTIFICATE



SSI Memo. No.  
030171101166

## Vision

“To provide a centre of excellence which is globally recognized for product value & employee care while delivering quality, innovation, customer satisfaction and company profitability.”

## Mission

Advance Switchgear Co. Shall be professionally managed, multinational, technical expert, committed to total customer satisfaction & attending global benchmark while meeting expectations of employees & society.



## Clients

- We have worked directly for the following:
- \* Electrical and mechanical contractors
  - \* Control specialists
  - \* Building services consultants
  - \* General contracting companies
  - \* End Users

# Introduction

Advance Switchgear Co. is one of the leading Switchgear Manufacturers an ISO 9001 : 2008 Certified & PUNJAB GOVT. approved 'A' Class Electrical Contractors serving in the Punjab State and North Region, having main Office and most modern facility workshop based in Rajpura, Punjab.



With the flow of growth and prosperity path in this country, We established Advance Switchgear Company. to serve this Nation, its citizens and residents through all kinds of projects through professional manner and maintain extremely high quality standard of workmanship and timely completion of Projects complying specification and Local Authority Regulation to the entire satisfaction of Consultant & Clients.

Advance Switchgear Co. is known for the high standard of all its Electrical Contracting Services, quality of workmanship - and giving value for money. Our personalized approach to our clients helps create a friendly and lasting relationship.

Advance Switchgear Co. aims to give every client certainty that their project will be delivered to their complete satisfaction, fulfilling their objectives on timing, quality and budget.

Our strong customer focus approach & constant quest for top quality have enabled Advance Switchgear Co. to become a leading reputed company in the switchgear industry & Contracting.

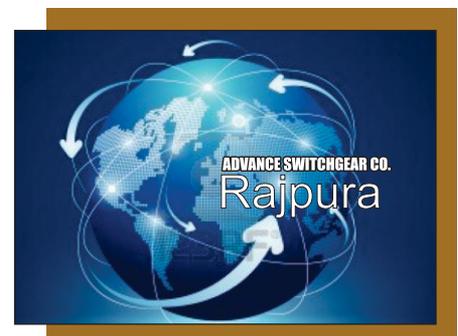


## Manufacturing facilities :

7000 sq. ft. area at rajpura for manufacturing of LT Panels. HT Panels, Control Panel and other precision sheet metal. Shearing power press NC press, powder coating plant, with 4 Tank Pretreatment Plant, MIG, TIG & ARC Welding and Design Centre.

## Engineering Design :

Our design cell is equipped with latest facilities of design and development. Auto - Cad system has been installed to assist the team of well-qualified engineers to design panels confirming to relevant IS specifications, inspection, connection of the cables, relocation of the outgoing circuits and maintenance.



# MAIN DISTRIBUTION BOARD

## FEATURES & OPTIONS

- Fully welded and modular steel construction cubicles with all form of separation available.
- Assemblies as per IS:8623, IEC-60439-1 & IEC-61439-1. Up to From 4
- CPRI Certified busbar systems up to 4000A.
- Front and rear access designs suitable for top or bottom entry for cables.
- Standard paint finish RAL 7032 Light Grey with all other RAL & BS colours available on request
- Internal Power factor correction can be incorporated.
- All types of functional units including ACB's, MCCB's.
- Fuse switches & MCB of fuse boards In fixed, draw out and plug in formats.
- Components from all leading manufacturer with in our standard arrangements.
- Equipment can incorporate a wide range of intelligent system controls and automation with conventional relay logic control or PLC systems.
- Index of protection IP 31 & IP 54.



# SUB DISTRIBUTION BOARD

## LOAD BANK TYPE

- From 4 to 16 ways, 3/4pole.
- In comer load break switch or MCCB upto 1000A.
- Ample cabling space.
- Top, Bottom and Side entry.
- 36kA short circuit rating.
- Protection class up to IP65.
- Ambient temperature rating 50°C.



## GENERAL FEATURES

- Busbar and incoming terminal are fully shrouded
- Box type terminal shell be provided outgoing MCCBs for terminal of cables to reducing connection costs
- Metering section and cable plinth can provided.

# APFC PANEL WITH & WITHOUT HARMONIC FILTER

Capacitor Banks improve the power factor by adding capacitive reactance in steps as per the power factor requirement. Power factor controller constantly monitors the load (and power factor) of the system on LV Panel and switch on/ off the capacitor steps to maintain the system power factor to the set value. It provides optimum power factor improvement to compensate for lagging Vars in the system, seen as a clean and reliable solution to providing quality power to the distribution network and to economize the electricity charge to customer/consumer.

## GENERAL FEATURES

- 💡 Standard ratings from 17.5kvar to 600kvar.
- 💡 Standard and detuned capacitor bank.
- 💡 Power Factor Correction by multi step design.
- 💡 Temperature controlled by fan .
- 💡 Special fixing brackets for the capacitor .
- 💡 Manufacture to form 2 construction.
- 💡 Easy installation and maintenance.



## CONTROL PANELS

We offer a range of control panels to our clients across the global markets. These electric panels comes with main incomers powers contractors, power fuse, ammeter control unit voltmeter selector, indicators, hooters, powerfuse, control fuse, transformers and various other units, All the control panels are checked for their flaw less manufacturing an functioning before they are sent at the client's end.

## GENERAL FEATURES

- 💡 Design to client's requirements.
- 💡 Built with Mosaic Mimics Process Visualisation equipment and Man Machine Interface.
- 💡 Controls by programmable logic control and hard wired relay logic.
- 💡 Equipped with optional Alarm Annunciators.



## APPLICATIONS

- \* Rice Mills.
- \* Industrial Installations.
- \* Water Treatment Plants.
- \* Irrigation System.
- \* Hospitals, Hotel Industry.
- \* Building Management Systems.

# AFTER SALES SERVICE & TECHNICAL ASSISTANCE

Advance Switchgear Co. has the ability to provide comprehensive range of services and technical assistance. A designated and competent technician is fully equipped and available at short notice to attend at either the installed equipment site or your individual workshop locations through the India. This technician is backed up in his function by the support and advisory capabilities of further Advance Switchgear Co. personnel involved in the Design, Testing, Contract Management and manufacture of the offered product range. These Functions are also Available to you via the Sales and contract management structure of the company for advice, assistance and services, inclusive of a comprehensive range of spares and related materials appropriate to your needs.

## TESTING

Air panels are routinely tested in the following sequential manner.

- \* Visual Inspection and dimension check.
- \* Megger test (phase to phase).
- \* Megger test (phase to earth).
- \* Megger test (phase to neutral).
- \* H.V. test (phase to phase).
- \* H.V. (phase to earth).
- \* H.V. (phase to neutral).
- \* Control circuit test with single phase.
- \* Functional test with 3 phases,  
415V, 50Hz. Supply.



## Business Drivers

Panel builders and designers are tasked with many challenges. These challenges need to be met while not sacrificing the quality, reliability or design of the product. Anixter can help you with many of these challenges :

- \* Reducing manufacturing costs.
- \* Quickly commissioning designs and products.
- \* Minimizing the overall product size.
- \* Pursuing aggressive production timelines.
- \* Engaging in supplier consolidation.
- \* Improving material and lead-time management.
- \* Providing access to a diverse breadth of inventory.
- \* Recommending emerging technologies.





# PROTECTION DEGREE TABLE

# IMPORTANT FORMULAS

Degree of protection of enclosures of low tension electrical equipment

First Numeral Protection against solid bodies	Second Numeral Protection against solid bodies	Third Numeral
<b>IP</b>  No protection	<b>IP</b>  No protection	<b>IP</b>  No protection
<b>01</b>  Protection against solid bodies greater than 50 mm (for example, involuntary hand contact)	<b>01</b>  Protection against vertical water falls (condensation)	<b>01</b>  Impact energy 0.150 J.
<b>02</b>  Protection against solid bodies greater than 12 mm (for ex. fingers)	<b>02</b>  Protection against water falls up to 150 from the vertical	<b>02</b>  Impact energy 0.200 J.
<b>03</b>  Protection against solid bodies greater than 2.5 mm (for ex. cables, tools...)	<b>03</b>  Protection against water falls up to 600 from the vertical	<b>03</b>  Impact energy 0.350 J.
<b>04</b>  Protection against solid bodies greater than 1 mm (for ex. fine cables, small tools...)	<b>04</b>  Protection against water splashes from all directions	<b>04</b>  Impact energy 0.500 J.
<b>05</b>  Protection against dust (no harmful deposits)	<b>05</b>  Protection against water jets from all directions	<b>05</b>  Impact energy 0.700 J.
<b>06</b>  Fully protection against dust	<b>06</b>  Protection against water jets similar to sea water surge	<b>06</b>  Impact energy 1.00 J.
	<b>07</b>  Protection against immersion	<b>07</b>  Impact energy 2.00 J.
	<b>08</b>  Protection against effects of long immersion under pressure	<b>08</b>  Impact energy 5.00 J.
		<b>09</b>  Impact energy 10.00 J.
		<b>10</b>  Impact energy 20.00 J.

**E = Voltage / I = Amps / PF = Power Factor / EFF = Efficiency / HP = Horsepower**

To Find	Direct Current	Alternating Current		
		Single Phase	Two-Phase* Four - Wire	Three Phase
Amperes when Horsepower is known	$\frac{HP \times 746}{E \times EFF}$	$\frac{HP \times 746}{E \times EFF \times PF \times 2}$	$\frac{HP \times 746}{2 \times E \times EFF \times PF}$	$\frac{HP \times 746}{E \times EFF \times PF \times 1.73}$
Amperes when kilowatts are known	$\frac{KW \times 1000}{E}$	$\frac{KW \times 1000}{E \times PF}$	$\frac{KW \times 1000}{2 \times E \times PF}$	$\frac{KW \times 1000}{E \times PF \times 1.73}$
Amperes when "KVA" is known		$\frac{KVA \times 1000}{E}$	$\frac{KVA \times 1000}{2 \times E}$	$\frac{KVA \times 1000}{E \times 1.73}$
Kilowatts	$\frac{E \times I}{1000}$	$\frac{E \times I \times PF}{1000}$	$\frac{I \times E \times 2 \times PF}{1000}$	$\frac{E \times I \times 1.73 \times PF}{1000}$
Kilovolt Amperes "KVA"-		$\frac{I \times E}{1000}$	$\frac{I \times E \times 2}{1000}$	$\frac{E \times I \times 1.73}{1000}$
Horsepower (Output)	$\frac{E \times I \times EFF}{746}$	$\frac{E \times I \times EFF \times PF}{746}$	$\frac{I \times E \times 2 \times EFF \times PF}{746}$	$\frac{E \times I \times EFF \times PF \times 1.73}{746}$

## CORE VALUES

- 💡 A Commitment to set standards in our business and transactions based on mutual trust makes best leadership.
- 💡 A Commitment to be ethical, sincere and open in our dealings shows our integrity and Transparency.
- 💡 A Commitment to strive relentlessly, to constantly improve ourselves, our teams, our services and products so as to become the best in class makes us in this field.
- 💡 Uncompromising commitment for Quality, Health, Safety and Environment.
- 💡 An open relationship with our employees based on mutual trust, respect and success.



Manufacturing



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