

PRODUCT BROCHURE

Electrical Panels & Automation

APC Electricals LLP designs and manufactures low-tension switchgear assemblies, automation panels and cable management systems from its works at Agra, Uttar Pradesh. We are an ISO 9001:2015 certified company, MSME accredited, and a member of the National Chamber of Industries and Commerce, U.P. since 2016.

Every panel is engineered against the customer's single-line diagram rather than assembled from a catalogue. Design, fabrication, powder coating, wiring, testing and site commissioning are carried out in house, and each assembly is handed over with its own drawings, test records and O&M documentation.

Product range

Assembly	Typical application
LT Distribution Panel	Main and sub-distribution of 415 V supply across plant and building loads.
Main Distribution Panel with PLC-based auto load management	Centralised control of incomers and outgoings with inbuilt VFD and MCC sections.
Power Control Centre (PCC)	Receiving and primary distribution downstream of the transformer.
Motor Control Centre (MCC)	Grouped motor feeders, fully automatic, semi-automatic or fully manual.
Hybrid APFC Panel	Power factor correction combining contactor and thyristor switched stages for rapidly varying reactive loads.
Main LT Panel with inbuilt APFC	Distribution and power factor correction in a single lineup where floor space is limited.
Automation Panel with DG synchronising	Load sharing between multiple diesel generating sets.
DG-grid synchronising and auto load management panel	Fully PLC or relay-logic based transfer and load management between grid and DG.
AMF panel with inbuilt APFC	Automatic mains failure changeover for critical installations.
VFD / drive panel	AC and DC variable frequency drive feeders for pumps, fans and process drives.
2500 A ACB isolation panel	High-current isolation and protection at the incomer.
Ring Main Unit (RMU)	11 kV ring feeding and sectionalising for campus and industrial distribution.

Assembly	Typical application
11 kV / 0.433 kV Compact Sub-Station (CSS)	Packaged HV switchgear, transformer and LV panel in one outdoor enclosure.
11 kV CSS LV panel	Low-voltage section of a compact sub-station, including export-grade builds.
Feeder pillar and distribution board	Street lighting, outdoor and final distribution.
Cable tray — perforated and ladder type	Routing and support of power and control cabling.

Construction and indicative ratings

The parameters below describe the envelope APC Electricals builds within. Actual ratings are set by the customer's fault level, ambient conditions and single-line diagram.

System voltage	415 V, 3 phase, 4 wire, 50 Hz (LV assemblies); 11 kV for RMU and CSS
Incomer ratings	Typically 63 A to 4000 A, ACB, MCCB or SFU as specified
Busbar	Electrolytic grade aluminium or copper, sleeved, rated for continuous full load
Short-circuit withstand	Commonly specified at 25 kA, 35 kA or 50 kA for 1 second
Enclosure	CRCA sheet steel, 14 / 16 SWG, floor mounted or wall mounted
Degree of protection	IP42 to IP54 indoor; higher for outdoor and CSS applications
Finish	Seven-tank pre-treatment followed by powder coating, shade to customer requirement
Form of separation	Form 1 to Form 4 as required by the application
Standards	Built to IEC / IS practice for low-voltage switchgear and controlgear assemblies
Components	Reputed makes — Schneider, Siemens, L&T, ABB and equivalent, or to customer preference

Automation and control

Our automation work sits alongside the panel shop rather than being bought in, so control philosophy, wiring and enclosure are developed together.

- PLC, PAC and DCS based control panels, including programming and logic development.
- SCADA and HMI configuration for plant monitoring and operator interface.
- Automatic load management — priority-based shedding and restoration across feeders.
- DG synchronising and DG–grid synchronising, with load sharing across multiple sets.
- Automatic mains failure (AMF) changeover schemes.
- Variable frequency drive integration for energy conservation on pump and fan loads.
- Communication modules and energy meter integration over Modbus and equivalent protocols.
- Industrial energy conservation solutions developed from measured plant data.

Why our products

- Compact sizing, optimised to the customer's requirement.
- User-friendly layout for operation and maintenance access.
- Tested for high dynamic withstand capability.
- Long service life under industrial conditions.
- Designed using modern technology and expert design optimisation.

- Built with high-grade quality material throughout.

Quality and testing

Assemblies are routine tested before dispatch. Typical checks include continuity and wiring verification against the approved drawing, insulation resistance measurement, high-voltage withstand where applicable, functional testing of protection and control logic, operation of interlocks, and verification of earthing continuity. Test reports are issued with each panel, and type test certificates for bought-out components are provided on request.

Approvals, registrations and memberships

- ISO 9001:2015 certified organisation
- Dakshinanchal Vidyut Vitran Nigam Limited, Agra (DVVNL)
- Uttar Pradesh Power Corporation Limited (UPPCL)
- Micro, Small & Medium Enterprises (MSME)
- National Small Industries Corporation Ltd (NSIC)
- National Chamber of Industries and Commerce, U.P. (NCIC)
- National Thermal Power Corporation Ltd (NTPC)
- GAIL India Limited
- District Industries Centre (DIC) · Small Scale Industries (SSI)

Beyond the panel

Supply is only part of the job. We carry out unloading and shifting of LT panels across the country, installation of HT works up to 33 kV and associated LT works, cable tray erection, cable laying and termination, and commissioning of sub-stations. Our Electrical Doctor service vehicle provides 24-hour breakdown attendance. These are covered in our companion document, *Services & Consultancy*.

Enquiries

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Ratings, dimensions and configurations in this document are indicative and describe the range APC Electricals builds to. Every assembly is engineered to the customer's single-line diagram, fault level and site conditions; final particulars are confirmed at the offer stage. APC Electricals reserves the right to alter specifications without notice.