

# Power<sup>+</sup>

Whether you generate, distribute or consume power, **Power<sup>+</sup>** will give you a versatile and cost effective range of Medium Voltage Switchgear panels with ratings and features comparable with the best in the world.



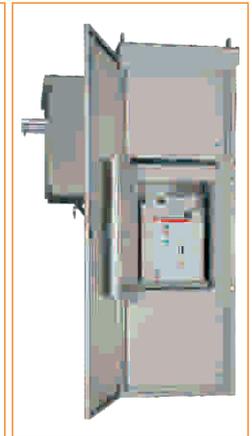
Power<sup>+</sup>V



Power<sup>+</sup>F



Power<sup>+</sup>F3



Power<sup>+</sup>VO

## PRODUCT RANGE

**Power<sup>+</sup>V** VCB Panels Indoor type upto 12 KV

**Power<sup>+</sup>F** SF6 Panels Indoor type upto 12 KV

**Power<sup>+</sup>M** VCB HT Motor Starter Panels

**Power<sup>+</sup>VO** VCB Panels Outdoor type upto 12 KV

**Power<sup>+</sup>F3** SF6 Panels Indoor type upto 36 KV

Power<sup>+</sup> range of Air Insulated Medium Voltage Switchgear is manufactured by NIE Power and Engineering (P) Ltd. an ABB System House  
It is a New India Electricals Group Company



## INTRODUCTION

Our aim is to provide a comprehensive range of highly reliable POWER equipments to Utilities, Contractors, Industry users, OEMs and Projects.

With the right mix of T&D products, a WORLD-CLASS Team and a REPUTABLE name for engineering and project management, we can provide you with the ideal solution for your particular power supply & distribution networks, whether standardized or customized.

Buying equipments from New India Electricals means gaining a partner you can rely on for your equipment's lifetime. We shall help you make decisions regarding your needs right from the early design stage, to the actual delivery phase and throughout its life cycle.

Our field of expertise covers the entire END-to-END solution for POWER DISTRIBUTION & TRANSMISSION upto 400KV. Design, Manufacture, Source, Supply, Erect, Test, Commission, Handover & Maintain.

Our equipments are manufactured under the most stringent quality processes with a clear focus on performance and longevity. This is why we source sub components from global leaders like ABB, AREV A, SIEMENS, ALSTHOM and the like.

We design and manufacture Metal Clad Medium Voltage Panels with a simple philosophy of: Longevity & Reliability. Our Specifications conform to relevant IS / BS & IEC Standards. Our units are designed to withstand a higher degree of electrical impulses, short circuit forces, thermal and dynamic stresses. With Optimum utilization of active material we achieve compactness & efficiency in performance. With special design features developed over many years of practical experience we are able to offer trouble-free performance during surges & frequent short circuits. By Standardising manufacturing techniques we ensure cost effectiveness & reliability in performance.

All our units are TYPE-TESTED at Central Power Research Institute, INDIA.

## Cubicle Type Power<sup>+</sup>V

3.3KV to 12KV Air Insulated Indoor Vacuum Switchgear



### SALIENT FEATURES

- Metal clad construction—all segregated compartments
- IP4X degree of protection externally & IP2X between compartments
- Independent exhaust vents for all HT compartment
- Modular Construction for expansions with bolted structure
- Type Tested for BIL & short circuit as per IEC 62271/200/2003
- Lipped-edge construction for additional strength
- Rodent proof
- Optional integral earth switch line side
- Maintenance friendly
- Foundation frame as standard supply

### BREAKER COMPARTMENT

- Racking in/out of breaker from "test" to "service" vice versa with cubicle door closed
- Mechanical inter lock to prevent racking in/out of breaker is in closed Position
- Live parts covered by automatic metallic shutters when breaker is racked out
- Multiple guides for safe and sure engagement of fixed and moving contacts

### METERING COMPARTMENT

- Metering compartment with numerical/static/electromagnetic relays
- Adequate space for case of control and indication

### CABLE AND CURRENT TRANSFORMER (CT) COMPARTMENT

- Spacious compartment to accommodate 1 set CTs and 2 runs of cables
- Option of rear extension to accommodate extra CTs or cables
- Adequate height for cable termination

### BUS BAR COMPARTMENT

- Spacious bus bar compartment for adequate air clearances
- Option for busbar insulation available
- Option for both CU and AL Busbar

### POTENTIAL TRANSFORMER (PT) COMPARTMENT

- Withdrawable line PT provided in the breaker panel
- Removable HT fuse mounted on the PT



## Cubicle Type Power<sup>+</sup>F

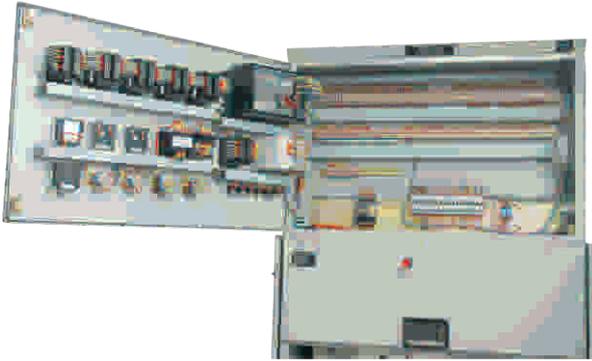
3.3KV to 12KV Air Insulated Indoor SF6 Switchgear

### Technical Details Cubicle Type

DESCRIPTION	UNIT	Power <sup>+</sup> V	Power <sup>+</sup> F
Rated voltage	KV	3.3.KV to 12KV	3.3 to 12KV
Rated frequency	Hz	50	50
Rated bus bar current	A	Upto 2000 A	630,1250,1600 2000,2500, 3150
Short time withstand current	KA KA <sub>p</sub>	26.3 66	40 / 25 100
Insulation levels	KVrms/kVp	28/75/95	28/75
Width x depth x height Up to 1600A	mm	600 x 1423 x 2350	800 x 1350 x 2350
Weight with circuit breaker [approx]	Kg	700	850
Degree of protection:			
*Enclosure	-	IP4X	IP4X
*between the compartment / Switchgear	-	IP2X	IP2X

# Cubicle Type Power<sup>+</sup>F3

36KV Air Insulated Indoor SF6 Switchgear



## SALIENT FEATURES

- Metal clad construction—all segregated compartments
- IP4X degree of protection externally & IP2X between compartments
- Independent exhaust vents for all HT compartment
- Modular Construction for expansions with bolted structure
- Type Tested for BIL & short circuit as per IEC 62271/200/2003
- Lipped-edge construction for additional strength
- Rodent proof
- Optional earth switch-bus side as well line side
- Maintenance friendly
- Foundation frame as standard supply

## METERING COMPARTMENT

- Metering compartment with numerical / static / electromagnetic relays
- Adequate space for case of control and indication

## BREAKER COMPARTMENT

- Racking in/out of breaker from "test" to "service" vice versa with cubicle door closed
- Mechanical inter lock to prevent racking in/out of breaker is in closed Position
- Live parts covered by automatic metallic shutters when breaker is racked out
- Multiple guides for safe and sure engagement of fixed and moving contacts

## BUS BAR COMPARTMENT

- Spacious bus bar compartment for adequate air clearances
- Option for busbar insulation available
- Option for both CU and AL Busbar

## CABLE AND CURRENT TRANSFORMER (CT) COMPARTMENT

- Spacious compartment to accommodate 1 set CTs and 2 runs of 3 core cables
- Option of rear extension to accommodate extra CTs or cables
- Adequate height for cable termination

## POTENTIAL TRANSFORMER (PT) COMPARTMENT

- Fixed line PT provided in the breaker panel
- Removable HT fuse mounted on the PT
- Withdrawable line PT provided in the breaker panel on request



## Technical Details Cubicle Type Power<sup>+</sup> F3

DESCRIPTION	UNIT	RATING
Rated voltage	KV	36
Rated frequency	Hz	50
Rated bus bar current	A	630,1250,1600, 2000,2500
Short time withstand current	KA KA <sub>p</sub>	31.5/25 100
Insulation levels	KVrms/kVp	70/140
Width x depth x height	mm	1220 x 2300 x 2300
Weight with circuit breaker (approx)	Kg	1500
Degree of protection:		
*Enclosure	-	IP4X
*within the switchgear	-	IP2X

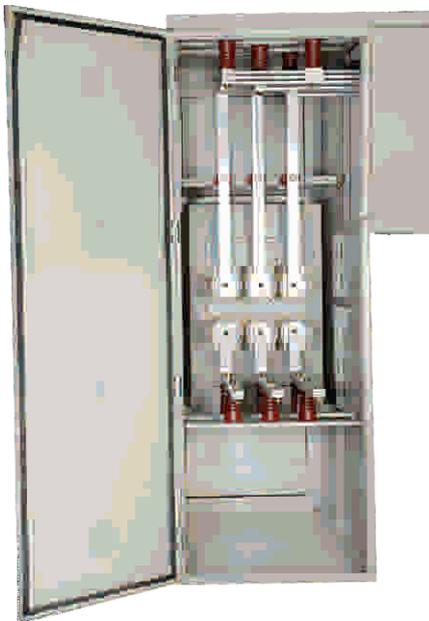
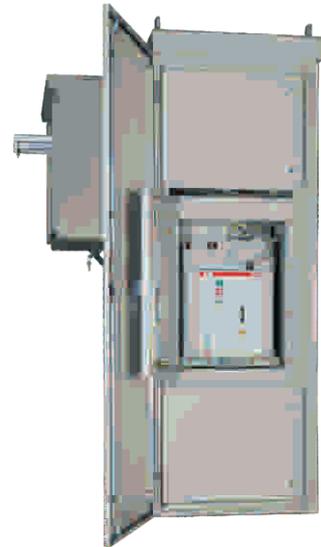


# Kiosk Type Power+VO

3.3 KV to 12KV Air Insulated Outdoor Kiosk Vacuum / SF6 Switchgear

## SALIENT FEATURES

- Kiosk Type construction With Double door in the front
- Rear door is both hinged and bolted for safety
- Adequate slope given on top roof to drain rain water, dust & Particles.
- Robust weather & dust proof - IP5X degree of protection externally & IP2X between compartments
- Fully welded construction, duly Powder painted after seven tank process of pretreatment.
- Type tested for BIL & Short circuit as per IEC 62271/200/2003
- Kiosk shown in the catalogue is of Cable in / Out design, side extendable kiosks also available.
- Rodent proof design
- Lockable front main door
- Maintenance friendly
- Fondation frame as standard supply



## METERING COMPARTMENT

- Metering compartment with numerical / static / electromagnetic relays
- Adequate space for case of control and indication
- Metering doors in two parts, one for metering and indication and the other for relays

## BREAKER COMPARTMENT

- Racking in / out of breaker from "test" to "service" vice versa is possible with breaker compartment door closed but with Kiosk door open.
- Mechanical inter lock to prevent racking in/out of breaker is in closed Position
- Live parts covered by automatic metallic shutters when breaker is racked out
- Multiple guides for safe and sure engagement of fixed and moving contacts

## BUS BAR COMPARTMENT

- Spacious bus bar compartment for adequate air clearances
- Option for busbar insulation available on request
- Option for both CU and AL Busbar

## CABLE AND CURRENT TRANSFORMER (CT) COMPARTMENT

- Spacious compartment to accommodate 1 set CTs and 2 runs of cables
- Adequate height for cable termination

## POTENTIAL TRANSFORMER (PT)

- Potential transformer can also be fitted inside the panel (fixed type)
- Removable HT fuse mounted on the PT

## Technical Details Kiosk Type Power+ VO

DESCRIPTION	UNIT	RATING
Rated voltage	KV	3.3 to 12
Rated frequency	Hz	50
Rated bus bar current	A	630,1250,1600, 2000,2500
Short time withstand current	KA KA <sub>p</sub>	26.3 66
Insulation levels	KVrms/kVp	28/75
Width x depth x height (approx)	mm	800 x 1620 x 2300
Weight with circuit breaker (approx)	Kg	800
Degree of protection :		
*Enclosure	-	IP5X
*within the switchgear	-	IP2X