

Thus Metal-clad switchgear ensures the highest possible degree of operational reliability, durability, protection & safety, which is mainly possible due to use of compartments and Spouts (Bushing) as per IEC and NTDC specifications.

Design:

Smart-Pro panel series is designed for indoor installation. These panels are type tested from international reputable STL authorities i.e. KERI. The Smart-Pro type panels are available in five different versions:

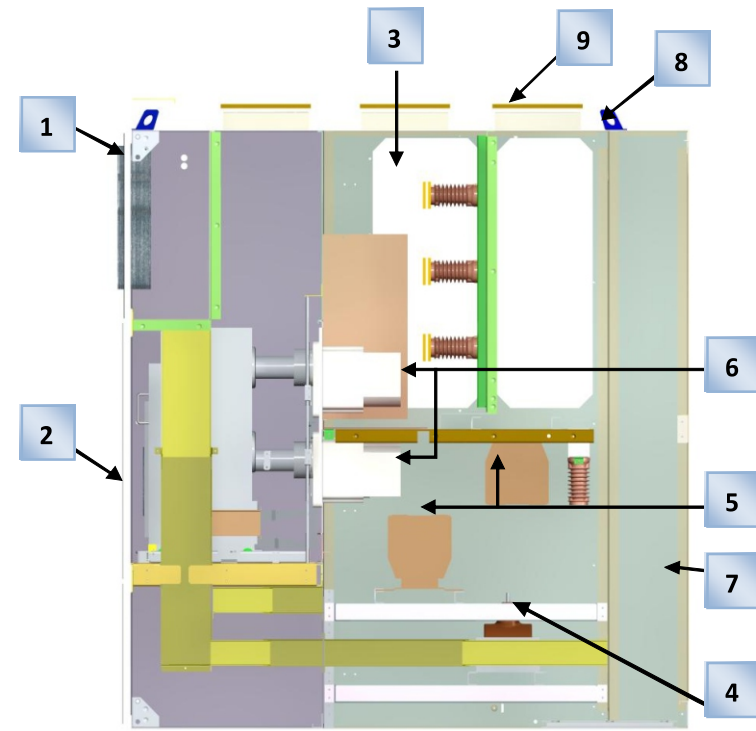
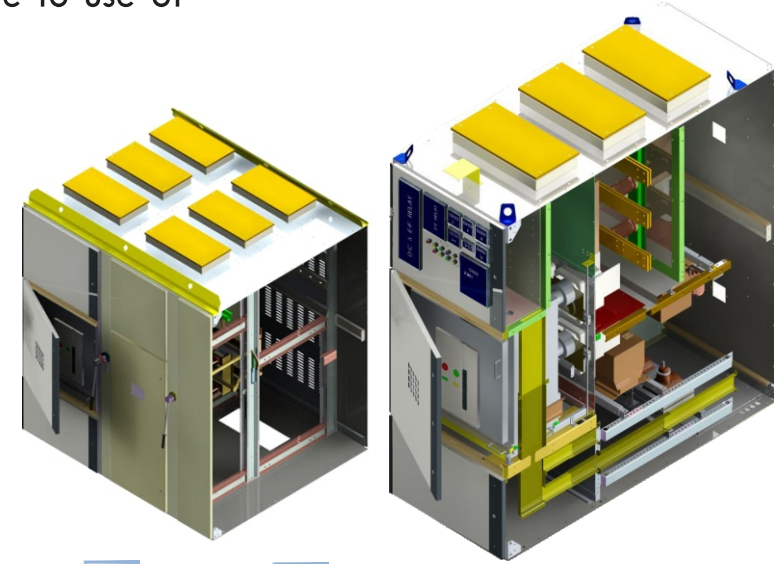
- Medium Voltage INCOMING Panel
- Medium Voltage BUS COUPLER Panel
- Medium Voltage OUTGOING Panel
- Medium Voltage CAPACITOR CONTROL Panel
- Medium Voltage CONSUMER Panel

General Arrangement:

(Only Specimen G.A. shown)

1. LV Instrument compartment
2. Circuit breaker compartment with VCB
3. Bus Bar compartment
4. Voltage Transformer
5. Current Transformer
6. Circuit breaker spouts
7. Cable compartment cover
8. Lifting lugs
9. Explosion vents spring loaded

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Salient Features:

- MV Metal Clad panels with cassette type truck mounted draw out VCB.
- Type tested by KERI, STL member independent testing authorities of international repute, according to NTDC specifications and IEC standards
- Circuit Breaker trolley has three positions, service position, isolated/test position and withdrawn position.
- In service position, automatic shutter mechanism is provided for protection against the live parts.
- The electrical and mechanical interlocking arrangement ensures maximum safety to operators.
- High quality cast resin insulators are used for more reliability.
- Degreasing, derusting and zinc phosphating process (on semi-automatic powder coating plant) ensures excellent quality paint on the panel. Paint thickness achieved from 80-120 Micron.
- Imported copper of 99.9% purity and high conductivity is used in the panel.
- Totally sheet enclosed construction prevents ingress of dirt and moisture.
- Interchangeability of switch carriage (trolley) of circuit breakers of the same rating.
- Each functional unit is stand alone structure but easily extendible at both sides.

Applications:

PEL Switchgear has wide range of applications. It can be used in substations and various types of industries. It is extensively used at:

- Utility Grid Stations
- Industrial Substations
- Feeder circuit protection

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Change your life

Smart-Pro Series
MEDIUM VOLTAGE SWITCHGEAR
 As per NTDC Specification P-44:96

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Technical Data:

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Electrical Characteristics	Units	Incoming	Bus Coupler	Outgoing	Capacitor Control	Consumer
Rated voltage	KV	15	15	15	15	15
Rated Frequency	Hz	50	50	50	50	50
Rated current	A	2500	2500	630	630	630
Rated short time current	KA	25	25	25	25	25
P.F. withstand voltage	KV	36	36	36	36	36
Impulse withstand voltage	KV	95	95	95	95	95
Degree of protection		IP3X	IP3X	IP3X	IP3X	IP3X
Circuit breaker Type		Vacuum	Vacuum	Vacuum	Vacuum	Vacuum
Applicable standards		IEC 62271-200 NTDC P-44:96				
Colour (Powder Paint)		RAL 7032				

Overall Panel Dimensions:

Panel Type	Dimensions (mm) (HxWxD)
Incoming	2200x900x2100
Outgoing	2200x900x1800
Bus Coupler	2200x2200x1800
Capacitor Control	2200x900x1800
Consumer	2200x900x1800



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and constructed with modular and extendible functional units and then carefully tested before leaving the factory. **Pak Elektron Limited**

The cubicle is divided into following grounded and isolated compartments:

- Circuit breaker compartment.
- Bus bar compartment.
- Instrument transformer compartment.
- Relay & metering compartment.



All relays and instruments are mounted in an easily lockable compartment mounted on the cubicle which facilitates safe and uninterrupted accessibility and flexibility in meeting customer requirements.

The design incorporates sufficient interlocks to safeguard operating personnel. Further its Metal Clad construction i.e. compartmentalization and use of spouts, offers several advantage such as:

- No vermin can pass from one compartment to another therefore minimizing faults likelihood
- In case of arc or fire, the fire cannot spread from one compartment to another compartment and results in minimum damage
- It needs low maintenance thus increases profitability and saves time
- It fulfils all safety requirements of IEC standards with capability to withstand IAC (Internal Arc Classification requirements) mentioned in the relevant IEC standards.



SMART-PRO

Type Tested Medium Voltage Metal Clad Switchgear rated 15kV
(As per NTDC Specification P-44:96)

Introduction:

PEL provides a comprehensive range of Type Tested MV switchgear series that is suitable for wide variety of MV distribution applications. The switchgear and their key components comply with the requirements of all significant international and national standards and regulations i.e. IEC 62271-200 & NTDC P-44:96 specifications. PEL switchgear manufacturing is ISO 9001:2008, 14001:2004, OHSAS 18001:2007 and CE certified.

Pioneers & Technology Leaders in manufacturing cassette type withdrawable Metal Clad Switchgear in Pakistan.

Smart-Pro Type Tested Metal Clad medium voltage switchgear panel series is used for utility electricity supply distribution, substation & feeder circuits protection.

Construction:

This panel range is developed for rated voltage of 15kV in conformity to NTDC specifications P-44:96 & all vital IEC standards. It includes every form of construction and possible equipment arrangement required as per mentioned specifications for standard MV panels. It is specially designed to be ready for installation, commissioning and erection at site i.e. every panel is completely assembled, wired

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