

PEL incorporates digital numerical electronic relays with high accuracy and quick sensing operation from state of the art international reputable relay manufacturers like GE, SEL, Schneider and ABB.



(Protection Relays)

Technical Data

Electrical Characteristics		Unit	Smart-pro Advance
Rated Voltage	(Ur)	KV	3.3 ~ 24
Rated Frequency	(fr)	Hz	50/60
Rated Current	(Ir)	A	650 ~ 4000
Rated Short Time Withstand Current	(Ik)	KA	8 ~ 50
Rated Withstand	P.F. withstand (1 min) (Ud)	KV	20 ~ 50
Voltage	Impulse withstand (1.2x50µs) (Up)	KV	60 ~ 125
Degree of Protection			IP3X ~ 54
C.B. Type			Vacuum
Applicable Standards			IEC 62271-200
			Customer Specification
Colour (Powder Paint)			Standard RAL 7032

[Medium Voltage Switchgear]



Quality Control

PEL has a very well organized, technically advanced and fully equipped quality control (QC) department for in-house testing and inspection to provide best quality products to our valuable customer. Following tests are performed on MV panels:

Routine Tests
(Perform In-house on All Units)



- Power Frequency Test on Auxiliary Circuit
- Power Frequency Test on Main Circuit
- Test on Auxiliary Electrical Devices (2 kV)
- Measurement of Resistance
- Mechanical Operation Test
- Design & Visual Checks
- Functional Test

Type Tests

(Perform on Special Request and Conditions)

- Impulse withstand Test (In-house)
- Temperature Rise test (In-house)
- Short Circuit Test (Rawat Lab)

Services

PEL has an advanced engineering services setup of electronic and electrical equipments operated by highly skilled and experienced engineers to provide utility and industrial customers with a prompt diagnosis, trouble shooting and site services. The services department of PEL brings together the ability, skills and associated product knowledge to provide a comprehensive range of services. These services provide the best possible solutions and allow our valued customers to have complete peace of mind.



[Medium Voltage Switchgear]



Change your life

Smart-Pro Advance Series
MEDIUM VOLTAGE SWITCHGEAR
upto 24 kV, 50 kA

PAK ELEKTRON LIMITED



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Pak Elektron Limited

Applicable Standards:

PEL Switchgear products comply with key national and international standards such as:

- IEC 62271-100
- IEC 62271-200
- IEC 60044-1
- IEC 60044-2
- NTDC-44:96

Applications:

PEL Switchgear has wide range of applications, it can be used in substations and various types of industries, some examples are:

- Various Industrial Substations
- Manufacturing industries
- Textile Industries
- Food Industries
- Hospitals
- All types of industries and factories with up to 24kV, 50kA systems



[Medium Voltage Switchgear]



Construction

These types of panels are customized and tailor-made according to customer's specific system specifications. It includes diversified forms of construction and possible equipment arrangements as per Project needs.

The cubical housing and doors are fabricated from 2-3mm thick sheet steel to form a robust and self supporting structure both in galvanized steel sheet and with paint coated steel sheet. Painting procedure includes through cleaning, pre-treatment, phosphating and final finishing in standard RAL colours through electrostatic powder paints.

Smart-Pro Advance is specially designed to be ready for installation, commissioning and erection at site i.e. every panel is completely assembled, wired and carefully tested before leaving the factory. Another characteristic is the logical modular functional unit.

PEL SWITCHGEAR MANUFACTURING IS ISO 9001:2008, 14001:2004, OHSAS 18001:2007 AND CE CERTIFIED.

Design

Smart-Pro Advance series panels are designed for indoor installation. The design incorporates sufficient interlocks to safeguard operating personnel. All relays and instruments are mounted in an easily lockable compartment mounted on the cubicle which facilitates safe and uninterrupted accessibility and flexibility meeting customer requirements.

All products can be of standard design or tailored to comply with customer's specific system requirements. Experienced company representatives can offer best engineering expertise on product selection, specification and system design.



[Medium Voltage Switchgear]

Pak Elektron Limited



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SMART-PRO ADVANCE

Air Insulated Medium Voltage Switchgear up to 24kV, 50kA

SMART-PRO ADVANCE OFFERS QUALITY, SAFETY, RELIABILITY, COMFORT AND PEACE OF MIND

Introduction

PEL is pioneer and leading switchgear manufacturer in Pakistan with more than 60 years of experience in this field. We offer a comprehensive range of MV switchgear assembly solution to cope with the need of diverse systems applications and demands. Smart-Pro Advance fully complies with the requirements of all significant international and national standards and regulations.

Smart-Pro Advance series comprises of metal clad and metal enclosed both types of medium voltage switchgear panels which are floor mounted vermin and dust proof. These are supplied with factory fitted components, copper bus bars, internal wiring and terminal blocks ready to be integrated in to your system.



AUTO CHANGE OVER PANELS

- ✓ Automatic Transfer of Supplies
- ✓ Two Incoming panels switchboard (Extendible) with security locks
- ✓ Electrical Interlocking of supplies

TRANSFORMER PROTECTION PANEL

- ✓ Advance Numerical Relay for Over Current & Earth Fault protection
- ✓ Optimized solution for fast installation,
- ✓ Optimized solution for panel coupling and assembling

INDUSTRIAL (Metering) PANEL

- ✓ Robust Panel Design
- ✓ Advance Technology VCB
- ✓ Advance Numerical Relay for Over Current & Earth Fault protection

SYNCHRONIZING PANELS

- ✓ Both Manual and Auto Synchronizing feature.
- ✓ Compliance with latest international standards
- ✓ Custom designed Mimic diagram



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