

# PERMANENT MAGNETIC ACTUATOR OPERATED, OUTDOOR VACCUUM CIRCUIT BREAKER

- Unique Single-box Solution
- Package consists of:
  - 3-Pole Gang-operated, Vacuum Circuit Breaker Epoxy Resin Cast, Bushing Embedded,
  - Current Transformer Integral Control Panel
  - Breaker Control Unit Numerical Relay
  - Tri-vector Metering (Optional)
  - Lightning Arrestor (Optional)
  - Magnetic Actuator Operating Mechanism 20,000 Mechanical Operations
  - Maintenance-free
  - Hydrophobic Cyclo-aliphatic (HCEP) Bushings
  - Epoxy Resin Cast
  - Terminal Connector to suit OH Conductor/
  - Cable Termination
  - Mechanical Trip/Lock-out facility
  - Truly space-saving
  - Suitable for tough outdoor environment

## **SALIENT FEATURES**

- Unique Single-box Solution
- Package consists of:
  - 3-Pole Gang-operated, Vacuum Circuit Breaker
  - Epoxy Resin Cast, Bushing Embedded, Current Transformer
  - o Integral Control Panel
  - o Breaker Control Unit
  - o Numerical Relay
  - o Tri-vector Metering (Optional)
- Magnetic Actuator Operating Mechanism
  - 20,000 Mechanical Operations
  - Maintenance-free
  - Hydrophobic Cyclo-aliphatic Epoxy Resin Cast (HCEP) Bushings
  - Lightning Arrestor (Optional)

## **BREAKER CONTROL UNIT**

- Micro-controller based
- In-built SMPS for capacitor charging
- High Capacity MOSFET for Switching
- Operates on a wide range of aux. supply
- In-built Trip Circuit Supervision
- In-built aux. Under-voltage Supervision
- In-built High Energy Capacitor Banks for Closing/Tripping
- Pulse Width Modulated Output to Closing/Tripping Coils
- In-built Indications
- In-built breaker failure protection
- In-built Breaker Status Monitoring
- Self-diagnostic

## OPTIONAL ACCESSORIES

- External PT (Oil-immersed or Dry Type)
- Lightning Arrestor at the Incoming and/or at the Outgoing Side
- Integral/External Dry Type Control Transformer
- Battery Bank & Charger
- Stainless Steel Control Cabinet
- Tariff Meter
- High End Protection Relay
- FRTU
- MODEM
- Solar Radiation Protection Cover in Control Cabinet

## Guaranteed Technical Particulars

PARAMETER	12kV	36kV
<b>Rated voltage (kV)</b>	12	36
<b>Rated Frequency (Hz.)</b>	50/60	50/60
<b>Rated one Minute Power Frequency Withstand Voltage (kV)</b>	28	70
<b>Rated Lightning Impulse Withstand Voltage (kVp)</b>	75	170
<b>Rated Current (A)</b>	1250	1600
<b>Rated Short Circuit Breaking Capacity (kA)</b>	26.3	26.3
<b>Rated Short Circuit Making Capacity (kAp)</b>	65.75	65.75
<b>Rated Short Time Withstand Current (kA)</b>	26.3	26.3
<b>Rated Short Time Withstand Duration (sec.)</b>	3	3
<b>Rated Operated Sequence</b>	O-300ms-CO-3min-CO	

PARAMETER	12kV	36kV
<b>Closing Time</b>	< 65ms	
<b>Tripping Time</b>	< 45ms	
<b>Rated Auxiliary Voltage</b>	230V AC / 24V DC	
<b>Rated Auxiliary Voltage Tolerance</b>	50% to 110%	
<b>Mechanical Life</b>	20000 Operations	
<b>Electrical Life at Rated Current</b>	20000 Operations	
<b>Electrical Life at 100% Short Circuit Breaking Capacity</b>	100 Operations	
<b>Auxiliary Contact</b>	4 N.O. + 4 N.C.	
<b>Interrupting Medium</b>	Vacuum	
<b>Insulation Medium</b>	Solid Dielectric	
<b>Operating Mechanism</b>	Magnetic Actuator	
<b>Degree of Protection (Switching Unit)</b>	IP 65	
<b>Degree of Protection (Control Cabinet)</b>	IP 65	
<b>Standard</b>	IS/IEC 62271-1/100	

