AMS

Air Insulated Medium Voltage Metal Clad Switchgear

General Characteristics of product

AMS is the state-of-the-art, three phase AC, fully metal-clad, air insulated, Arc proof and indoor compact design switchgear developed by FULMEN Group from SENTEG German experts and type tested in a Romanian lab ICMET. It is designed for full ratings of MV switchgear, from 7.2kV up to 40.5kV. with four individual compartment:

1) Busbar Compartment
2) Circuit Breaker Compartment
3) Cable Compartment
4) Low Voltage Compartment

Withdrawable Type is equipped with next generation cassette type of withdrawable embedded pole vacuum circuit breaker including related special trolley to draw in/out. Besides the cassette type of withdrawable embedded pole vacuum circuit breaker can also be equipped with SF6 gas insulated circuit breaker, fused-contactor, load-breaking switch, isolation truck, and a VT truck.

High speed earthing switch with short circuit making capability is employed in this switchgear.

The mechanical strength and anti-corrosion properties of the structural frame are ensured by ALUZINC sheet metal with double bending and rivet fixing technology. The whole structural frame of AMS is fabricated under the help of high precise assembly jigs, therefore the high dimensional accuracy and high mechanical quality is guaranteed.

AMS is designed with a perfect interlocking system which provides highest safety for operating personnel and equipment itself. It has inspection windows for both breaker and cable compartments, through which, the position of withdrawable unit of the breaker and the situation of the cable connection can be observed easily.

It can be equipped with traditional or integrated protection devices, as well as traditional CTS and PTs or sensors.

AMS is safe and reliable switchgear which had been widely accepted by various customers around the world involving: Oil, Gas and petrochemical plants, power plants, Power utility companies, Power transmission & distribution, Telecommunications, Airports, Railway industries, Water & Waste water treatment plants, etc.

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Comprehensive and Reliable Interlocking System

The AMS series switchgear is equipped with a comprehensive system of preventive mechanical interlocking to protect the equipment operation and service personnel from dangers of mal-operation. The interlocking is designed to prevent:

- A closed circuit breaker being inserted into or withdrawn from the service position.
- A circuit breaker being closed in other than the service, test position.
- Insertion of the circuit breaker into service position or withdrawal from service position if the door of C.B compartment is opened.
- Closing of earthing switch when the C.B is locked in the service position.
- Opening of the door of cable compartment when the earthing switch is in open position.
- Disengagement of secondary plug from socket when the C.B is located at service position.

AMS series Metal-clad switchgear are fully type tested in compliance with following international standards:

- IEC 62271:200
- IEC 60694
- DIN and VDE Standards

Ambient Condition

- Ambient Temperature: -15˚C ~ +40˚C
- Daily Average Temperature: Up to +35˚C

Average Ambient Humidity

- Average daily relative humidity: < 95%
- Average monthly relative humidity: < 90%
- Maximum operational altitude of installation: 1000m a.s.l
  (Up to 1700m above sea level as Optional)

Environmental Considerations

AMS has manufactured according to the ISO 14001 standard.

Pressure Relief Flaps

AMS switchgear is equipped with pressure relief flaps at the top of all three medium voltage compartments, which will open automatically to the rear side of switchgear when pressure loading is enabled because of internal arcing faults in the corresponding compartment. The pressure relief flaps protect from the following dangerous situations which will endanger the operating personnel or extend the effect of the fault to the whole switchgear system:

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- Burn-through of barriers to adjacent compartments.
- Burn-through of partitions to adjacent panels.
- Over-pressure loading to adjacent compartments and panels.
- Properly closed doors, shutters, etc. open themselves.
- Parts of switchgear fly off.

General Characteristics

Rated Voltage (kV)			12	24
Rated Frequency (Hz)			50 / 60	50 / 60
Rated Power Frequency Withstand Voltage/1 min (kV)			28	50
Rated Lightning Impulse Withstand Voltage (kV)			75	125
Rated Current Busbar (A)			Up to 2500	Up to 2500
Rated Current Feeder (A)			Up to 2500	Up to 2500
Rated Short Time Withstand Current / 3s (kA)			Up to 31.5	Up to 25
IAC Internal ARC Classification / 1s (kA)			31.5	25
Rated Peak Withstand Current (kA)			Up to 80	Up to 63
Ingress Protection (IP) Inside/Outside			IP2X / IP3X	IP2X / IP3X
Degree of Accessibility			A FLR	A FLR
Installation Altitude (m a.s.l)			1000	1000
Loss of Service Continuity LSC			2B	2B
Class of Partitioning			PM	PM
Dimension (mm)	Width	Up to 1250 A	650	800
		1600 A	800	800
		More than 2500A	1000	1000
	Depth		1400	1600
	Height		2250	2250
	Weight	Up to 1600A	800	900
		More than 1600A	1200	1300

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