

Medium Voltage Air Insulated Switchgear

12KV/630-1250A/25KA(3S)

 **Oasis**
MVSG-063/125

www.alhamad.ae



Plugged into your needs

Al Hamad is the leading manufacturing enterprise specialized in Low voltage to Medium voltage electrical products.

Headquartered in Abu Dhabi, UAE, the company covers entire MENA region and provide expert solutions in view of the local environment, requirements and necessities.

With an extensive experience of more than 2 decades and a thorough knowledge on Low and Medium voltage products, the team at Al Hamad understand

the increased demands of the products in upcoming years and worked collaboratively to manufacture and provide high quality solutions in utilities and many industrial applications.

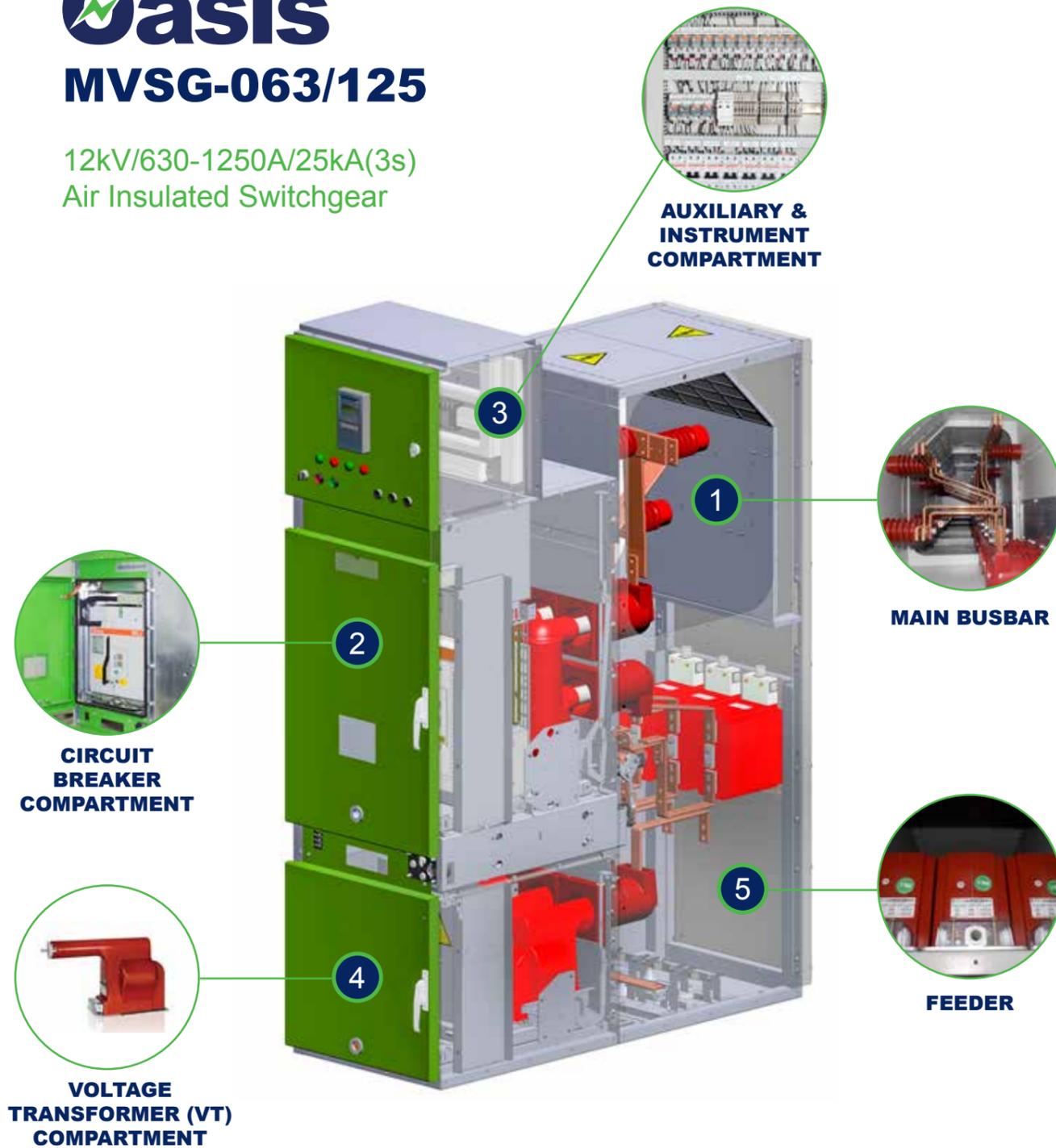
The team is dedicated to providing Electrical Solutions to multiple sectors including utilities, Oil & Gas, Defense & infrastructure segment.



Oasis

MVSG-063/125

12kV/630-1250A/25kA(3s)
Air Insulated Switchgear



Each unit consist of the following compartments:

1. MAIN BUSBAR

- Made of electrolytic copper
- Fixed isolating contacts by means of branch connection

2. CIRCUIT BREAKER COMPARTMENT

- Withdrawable type Vacuum circuit breaker
- Accordance with IEC 62271
- Long electrical & mechanical life
- Resin poles with embedded interrupters
- Sealed for life and maintenance free

3. AUXILIARY & INSTRUMENT COMPARTMENT

- Also called as the low voltage compartment
- Breakers, relays & lamps are mounted on din rails and door

4. VOLTAGE TRANSFORMER (VT) COMPARTMENT

- VT are Cast resin insulated
- Fixed / withdrawable type

5. FEEDER

- Consists of the Current transformer (CT), earth switch & earth bus bar
- CT are cast resin insulated
- CTs have a wound core or through bar with one or more cores upon requirement
- Earthing switch with short-circuit capacity to earth the cables/busbar system
- Earth bar made of electrolytic copper
- Earth bar runs longitudinally round the whole switchgear inside

DESCRIPTION SUMMARY

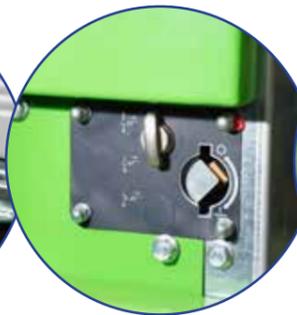
- Modular & Metal Clad type (LSC2B classification).
- Air insulated, equipped with Vacuum Circuit Breaker.
- Complying with IEC 62271.
- Internal Arc classified, **AFLR** at 25 kA/1 sec.
- Interlocks to prevent incorrect operations which might jeopardize the safety of the personnel in charge of it.

INTERLOCKS

- Shutters can be fitted with fail safe device to prevent their being manually opened with VCB removed & door open.
- Shutters can be locked using two independent padlocks.
- In-built voltage presence indicators.
- Interlocks are provided to prevent the following operations:
 - Circuit breaker closing in an intermediate position.
 - Circuit breaker racking in/racking out in closed position.
 - Circuit breaker compartment door opening in the connected/intermediate position.
 - Circuit breaker racking in with compartment door open.
 - Earthing switch closing with circuit breaker in connected/intermediate position.
 - Circuit breaker racking in with earth switch closed.



VCB Key lock &
Racking IN/OUT
Interlock



Earth Switch Operation
Interlock



Voltage Presence
Indicator



Door Interlock

CIRCUIT BREAKER

- WL/r', Sarel made Vacuum Circuit Breaker.
- Vacuum as the interruption and insulating medium.
- Circuit breaker fitted with a truck for racking in and out of switchgear with doors closed.
- Vacuum interrupters embedded in poles made of epoxy resin for protection against shock, humidity & environmental pollution.
- Circuit breaker poles sealed for life pressure system and maintenance free.



Table & Specification

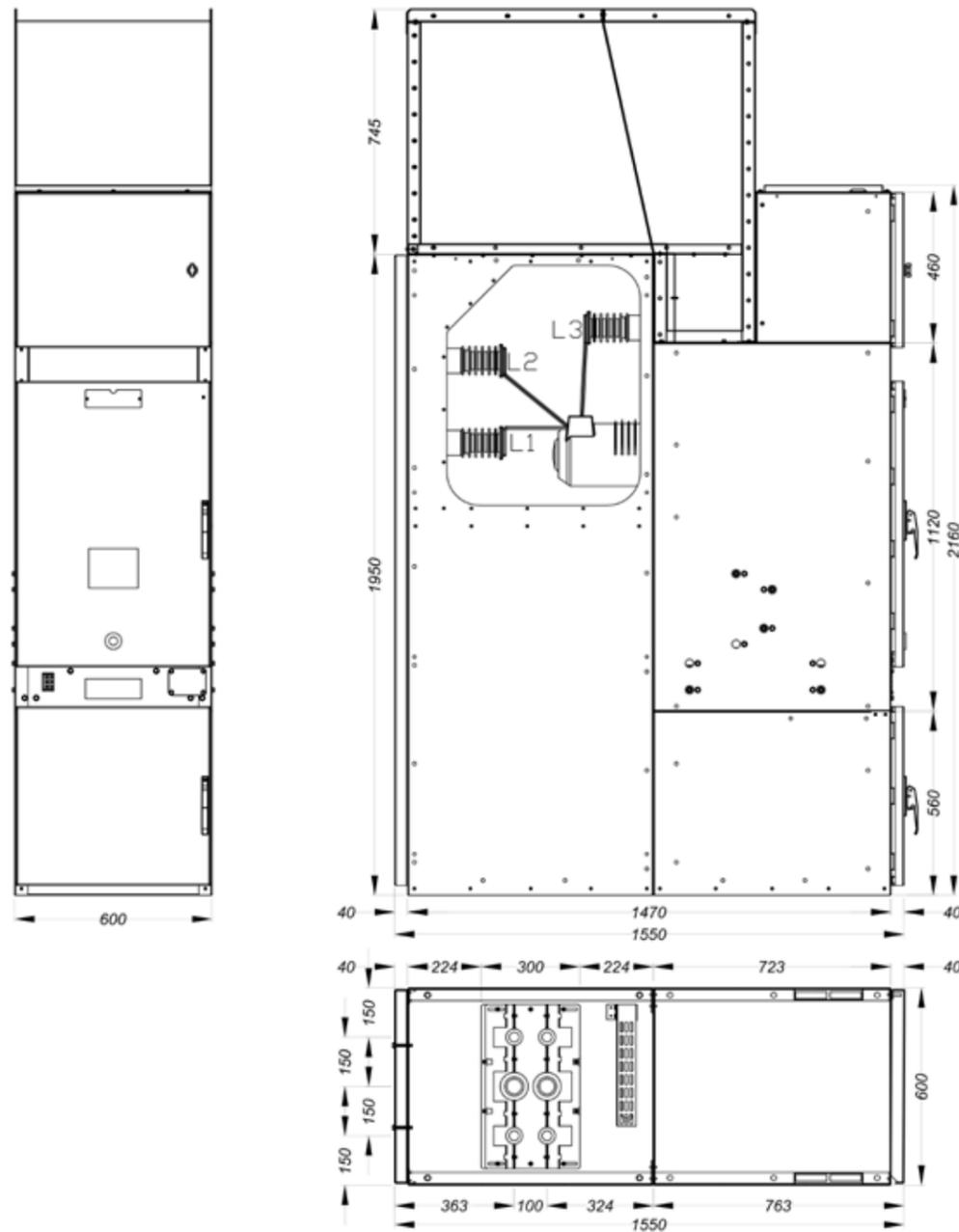
Switchgear Characteristics

Description		Up to 1250A MV Switchboard	IEC-62271
Standards		TYPE TESTED ASSEMBLY – CESI, Italy	
Electrical Data	Rated Voltage	Rated Voltage	12 kV
		Rated Lighting Impulse Withstand Voltage	75 kV
		Rated Power Frequency Withstand Voltage	28 kV, 1 min
	Rated Frequency	Rated Frequency	50 Hz
Rated Current	Main Busbar	630/1250A	
	Rated Short Time Withstand Current	25 kA, 3 s	
	Rated Peak Current	63 kA	
Operating Sequence	VCB operating sequence	O-0.3s-CO-15s-CO	
Mechanical Characteristics	Enclosure Dimensions	Standard Height	2700mm
		Panel Width	600mm
		Depth	1550mm
	Degrees of Protection	According to IEC 60529-2013	IP 4X
	Steel Components	Enclosure Body	2 & 3mm
		Mounting Plate	1.5 & 2mm
Surface Protection/ Paint	Door	3mm	
	Enclosure Body	Zinc-electro plate coated	
Mounting Plate	Mounting Plate	Zinc-electro plate coated	
	Door	Zinc-electro plate coated	
Powder coated	Door	Zinc-electro plate coated	
	As per requirement	As per requirement	
Busbar System		Copper Insulated	
Insulation Materials	Resistance of insulation materials to abnormal heat, in conformity with IEC 62271-200	Yes	
Switchgear	Operational Conditions	Usage/Installation location	Indoor
		Ambient Temperature (24h mean value)	-5 to 40 °C
		Altitude above sea level	≤ 1000 m

Electrical Characteristics

Vacuum Circuit Breaker	WL/r-C 12	
Rated voltage and isolation - kV	12	
Withstand voltage (1 min) - kV (50 Hz)	28	
Lighting impulse withstand voltage - kV	75	
Rated frequency - Hz	50	
Use	Oasis-MVSG 063/125	
Rated current - A (40°)	630	1250
Short time withstand current (3s) - kA	16	
	20	
	25	
	31.5	
Making capacity - kA	40	
	53	
	63	
	80	
Operation sequence	0-0,3-CO-3s-CO	
Opening Time - ms	40...60	
Breaking internal arc time - ms	10...15	
Total breaking time - ms	50...75	
Closing time - ms	60...80	
Overall Dimension	Height - mm	645
	Width - mm	502
	Depth - mm	679
Weight - Kg	100...150	

TYPICAL DRAWING FOR Oasis - MVSG125



CERTIFICATIONS



Dielectric, Temperature Rise & Internal Arc Performance



Temperature Rise Performance



Short Circuit Performance



Switching Performance



Short Circuit Performance on Vacuum Circuit Breaker



ALHAMAD

SWITCHGEAR

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