

UniGear

Medium-voltage air-insulated switchgear for marine application



Medium-voltage switchgear is a critical link in the power distribution chain of marine vessels. UniGear primary distribution switchgear are fully type tested in compliance with the most rigorous international standards and hold a wide range of marine certifications. Safety and reliability are key design criteria and the units are fully arc-proof.

The UniGear 550 is the perfect fit for marine applications, thanks to its reduced footprint and weight, and it is also available for shore connection solutions.

The product family also includes a motor control center solution, the UniGear MCC, which is fully available for highly demanding marine applications. For optimal flexibility, you can use a combination of UniGear ZS1 (single and double level), UniGear 550 and UniGear MCC in the same switchgear line-up, without using any adaptor panels. The UniGear product family switchgear cover ratings up to 4000A, 50kA.

Safety and reliability are key design criteria for the UniGear ZS1. The unit is fully arc-proof, and its double-level solutions enable more efficient use of space.

Vacuum and gas circuit-breakers offer maximum electrical performance.

DC components withstand up to 100% at 40 kA and peak currents up to 150 kA.

Range

- ...12 kV, ...4000 A, ...50 kA
- IEC 62271-200 compliant
- Approved by main shipping registers
- Highly customized versions

Safety

- Fitted with safety interlocks
- Internal arc classification IAC AFLR
- Classified LSC-2B, PM
- Circuit breaker racking with closed door
- Earthing switch with full making capacity

Flexibility

- Single and double level units
- Vacuum and SF6 circuit-breaker
- Vacuum contactor
- Traditional current transformer/voltage transformer and sensors
- Wall-mounted and free-standing solutions

Marine designs

- Skid-mounted sections
- Earthing transformer units
- Protection and control
- Thermo-graphic inspection
- Hi-fog protection
- Optical arc fault protection
- Ultra Fast Earthing Switch UFES
- Is-Limiter advanced fault current limiter

Technical data

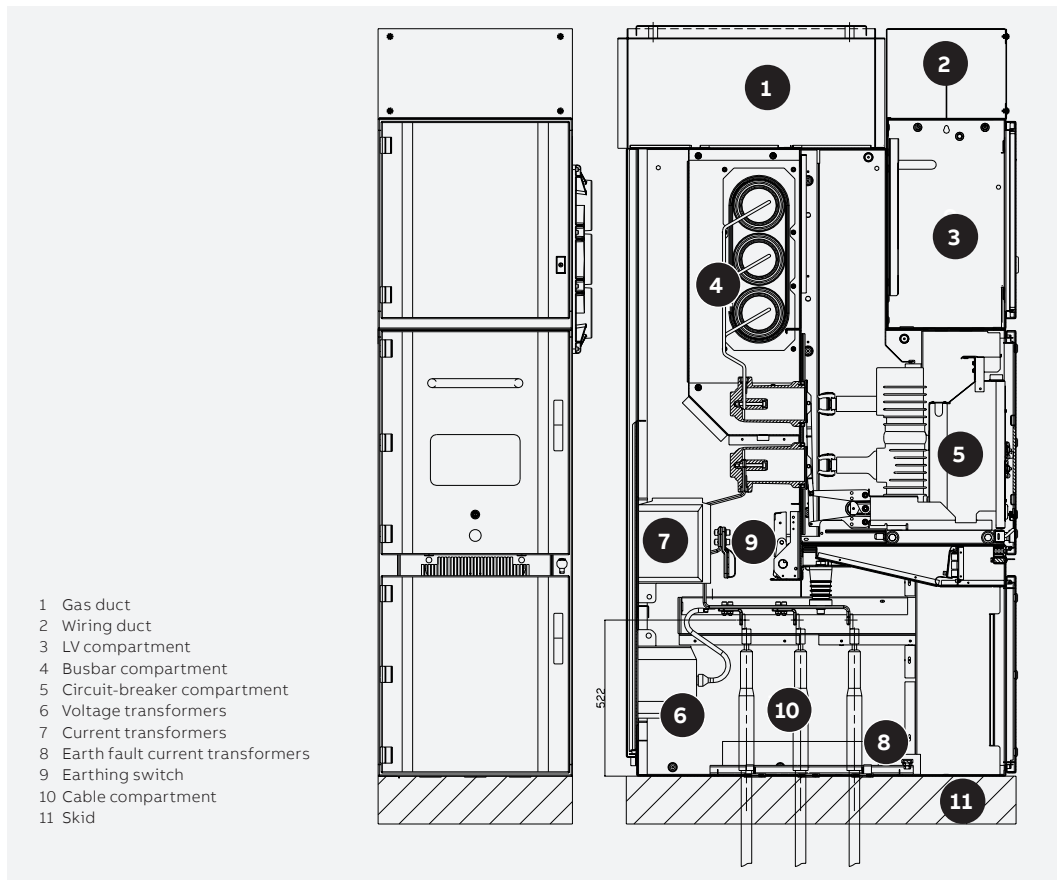
Switchgear	UniGear 7.2 kV	UniGear 12 kV
Type of construction	IAC AFLR	IAC AFLR
Rated voltage	[kV] 7.2	12
Rated insulation voltage	[kV] 7.2	12
Rated power frequency withstand voltage	[kV 1 min] 20	28
Rated lightning impulse withstand voltage	[kV] 60	75
Rated frequency	[Hz] 50 / 60	50 / 60
Rated short-time withstand current	[kA 3 s] ... 50	... 50
Peak current	[kA] 125	125
Internal arc withstand current	[kA 1 s] ... 40	... 40
	[kA 0.5 s] ... 50	... 50
Main busbar rated current (40 °C) ^{1) 2)}	[A] 1250 ... 4000	1250 ... 4000
Circuit-breaker rated current (40 °C)	[A] 630 ... 3150	630 ... 3150
Circuit-breaker rated current with forced ventilation (40 °C)	[A] 3600 ... 4000	3600 ... 4000
Overall dimensions of the basic cubicle ³⁾	H [mm] 2530 ⁴⁾	2530 ⁴⁾
	W [mm] 550 / 650 / 800 / 1000 ⁵⁾	550 / 650 / 800 / 1000 ⁵⁾
	D [mm] 1340 / 1650 ⁶⁾	1340 / 1650 ⁶⁾
Tested according to	IEC Standard	IEC Standard
Technical catalog	- UniGear ZS1, 1VCP000138 [Doc. ID] - UniGear 550, 1VCP000327 - UniGear MCC, 1VCP000405	



- 1) The values indicated are valid both for vacuum and SF6 circuit-breakers
 2) For panel with contactor the rated current value is 400 A
 3) These data refers to single level units

- 4) With installed compact exhaust duct with top chimneys and without skid (160 mm)
 5) Depending rating on nominal current or short circuit current
 6) Depending on the selected depth

Typical feeder unit – Single level design



- 1 Gas duct
- 2 Wiring duct
- 3 LV compartment
- 4 Busbar compartment
- 5 Circuit-breaker compartment
- 6 Voltage transformers
- 7 Current transformers
- 8 Earth fault current transformers
- 9 Earthing switch
- 10 Cable compartment
- 11 Skid

ABB Ltd.
 Distribution Solutions
 P.O. Box 8131
 CH-8050 Zurich
 Switzerland
abb.com/mediumvoltage
abb.com/contactcenter

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