

Vacuum generator switchgear for oil and gas applications

Safe, reliable, and cost-efficient power supply

Siemens high-current and generator switchgear with vacuum switching technology is the result of more than 20 years of continuous development. It answers highest technological, quality and personal safety requirements, enabling maximum operational reliability in oil and gas applications up to 400 MW.

Our generator circuit-breakers with vacuum technology (VGCB) are specially tested according to the stringent IEEE C37.013 standard, fulfilling even higher requirements than IEC 62271-100, such as high short-circuit breaking current, high asymmetry and high rates of rise of recovery voltage (RRRV). In this way, they not only ensure a safe and reliable power supply for oil and gas applications, but also help to lower CAPEX, as our VGCB solutions can be easily integrated in the network thanks to their compact and space-saving design.

In addition, Siemens generator circuit-breakers with vacuum technology enhance your network availability by protecting network components and the entire facilities in case of a generator failure.

Networks with parallel generators on oil rigs and drill ships have to withstand higher currents and voltages compared to a standard distribution network. In this application high DC components, high RRRV and high short-circuit currents have to be handled. The physical behavior of vacuum circuit-breakers makes them most suitable for these requirements.

Customer benefits:

- Increased cost-efficiency and service continuity
- Minimized installation and maintenance costs
- Optimum personal safety
- Eco-friendly design
- Solutions tailored to individual requirements



Generator switchgear	HB1	HIGS	NXAIR
Application area	50 MW–170 MW	25 MW–65 MW	10 MW–65 MW
Rated voltage	up to 24 kV	up to 15 kV	up to 17.5 kV
Normal current	up to 6,700 A	up to 3,700 A	up to 4,000 A
Rated short-time withstand current/duration	up to 72 kA/1 s	up to 50 kA/3 s	up to 50 kA/3 s
Rated peak withstand current	up to 180 kA	up to 125 kA	up to 137 kA
Internal arc classification	up to IAC A FLR 72 kA/0.1 s		IAC A FLR 50 kA/1 s
Protection class	IP4X, IP54	IP42, IP54	IP3XD
Loss of service continuity category	LSC 1	LSC 1	LSC 2B
Installation	<ul style="list-style-type: none"> • Indoor • Outdoor 	<ul style="list-style-type: none"> • Indoor • Outdoor 	<ul style="list-style-type: none"> • Indoor
Type of connection	<ul style="list-style-type: none"> • Cable • Bus duct • Solid-insulated busbars • IPB 	<ul style="list-style-type: none"> • Directly at generator terminal 	<ul style="list-style-type: none"> • Cable • Bus duct

HB1 highlights:

- A compact solution, which can be adapted to customer-specific requirements
- Air-insulated, three-phase encapsulated, available for indoor and outdoor installation
- Factory-tested, can be easily installed and put into operation after delivery



HIGS highlights:

- Combination of conventional generator terminal box with generator switchgear functionality
- Increased profitability by fewer interfaces and less space requirements
- Factory-tested, easy installation



NXAIR highlights:

- Offers maximum personal safety through the internal arc classification IAC A FLR 50 kA, 1 s, maximum availability through the loss of service continuity category LSC 2B, and maximum reliability through partition class PM
- Increased profitability by fewer interfaces and less space requirements
- Modular and extendable



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