Grid Solutions

F35

Gas-Insulated Substations 170 kV, 50 kA, 4 000 A

GE Vernova makes the most of 50 years of experience in design, material selection, development, engineering, manufacturing and servicing of gas-insulated substations.

GE Vernova's F35 GIS meet the challenges of networks up to 170 kV for all applications: power generation, transmission, distribution, tertiary and heavy industry.

Highest Availability

- Best experience and reliability data
- Current transformers outside SF_6
- Drives and accessories at easy reach
- Pure-spring circuit-breaker drives

Shortest Site Works

- Complete bays assembled, wired, tested and shipped
- Isolating device for voltage transformer / surge arrester

Lowest Cost of Land and Civil Works

- The most compact 170 kV GIS: bay footprint 30% below market average

Smart Grid Features

- Full-digital monitoring, control and protection

Environment Friendliness

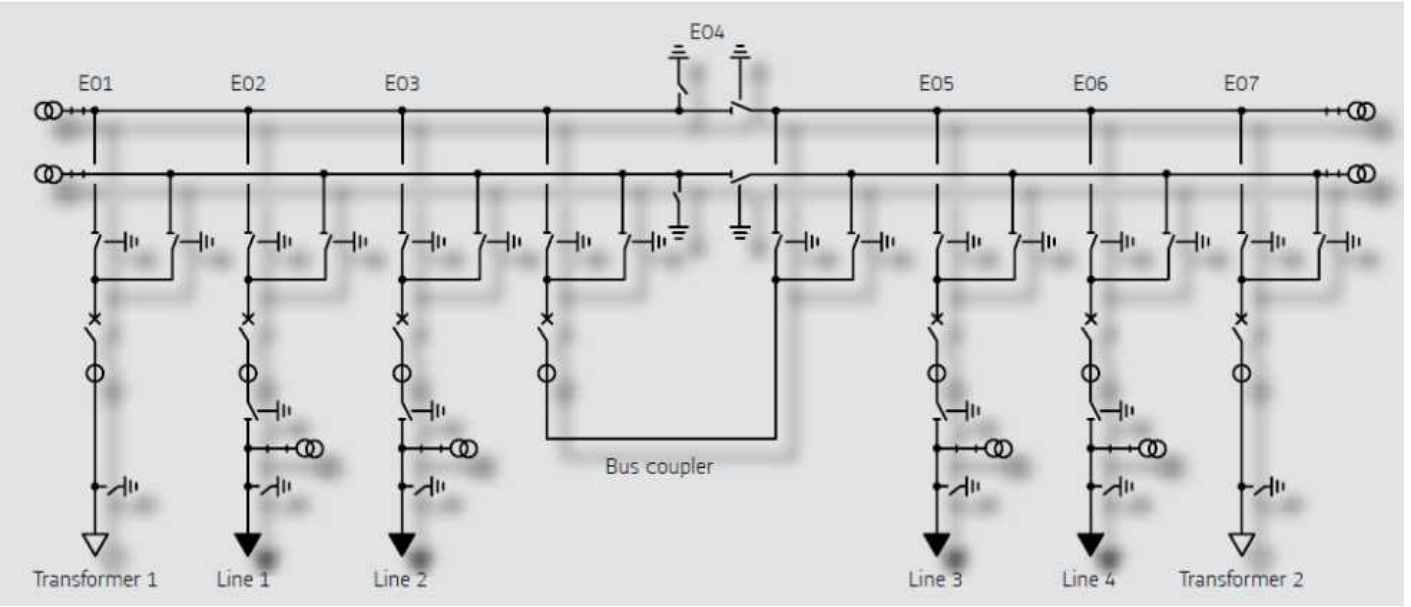
- First-in-class SF_6 sealing system

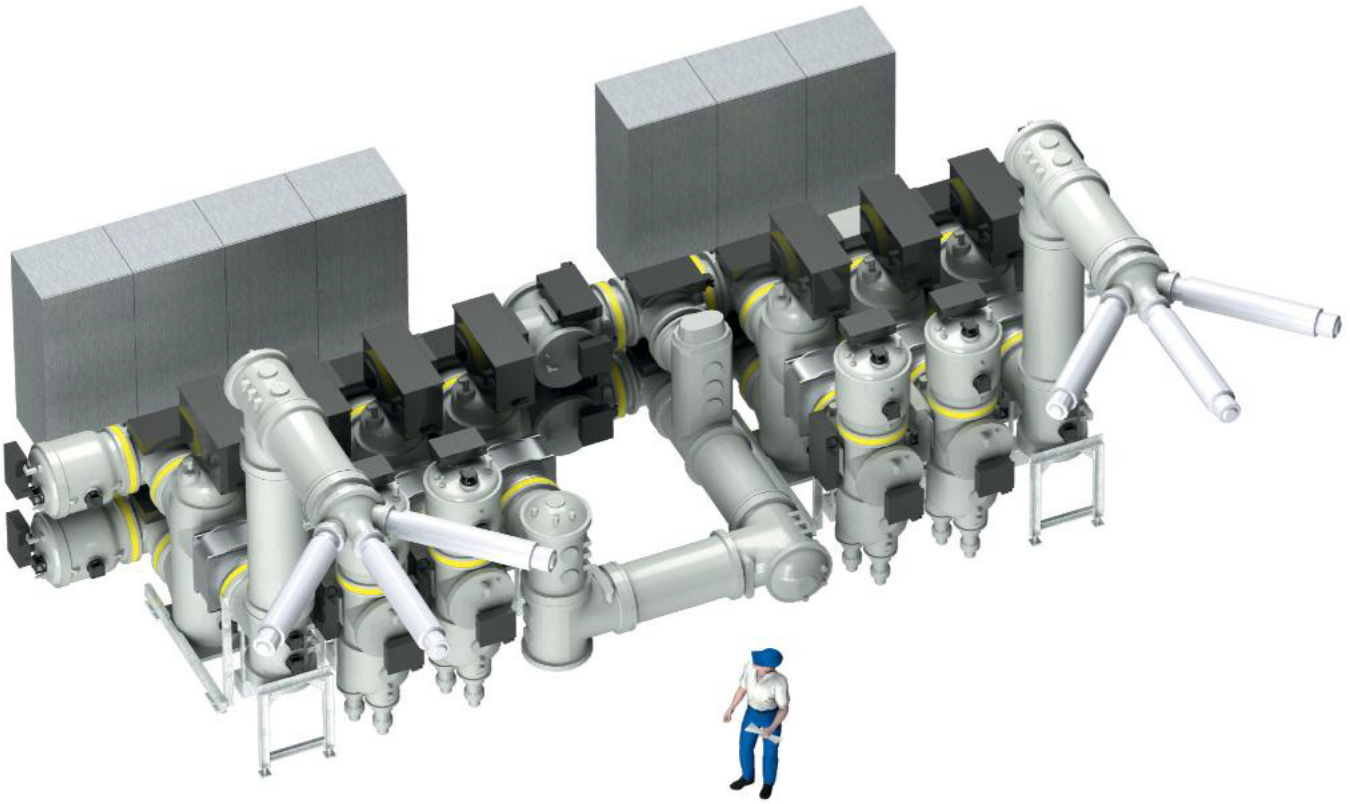
Customer Benefits

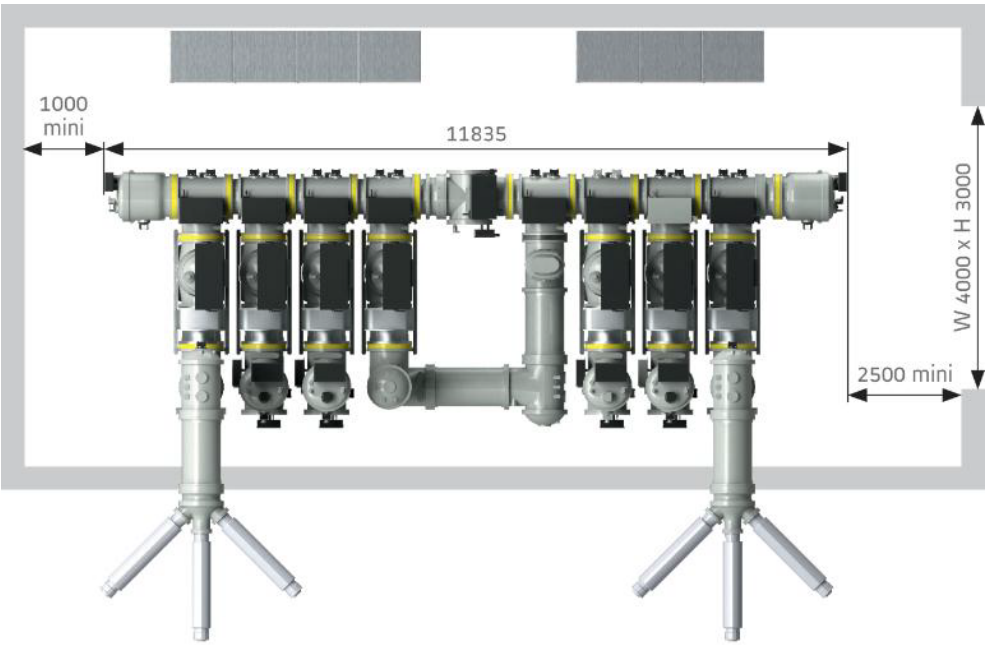
- Maximum safety
- Compact but accessible
- Field-proven reliability
- First-class availability
- Low total cost of ownership
- Smart Grid ready
- Low environmental impact

GE VERNOVA

F35 - 170 kV, 50 kA, 4 000 A - Double busbar diagram



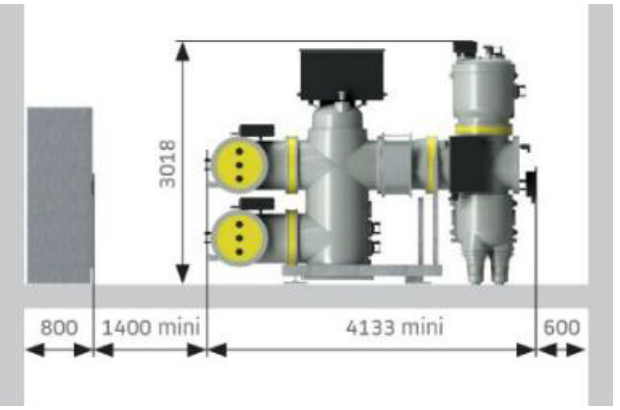




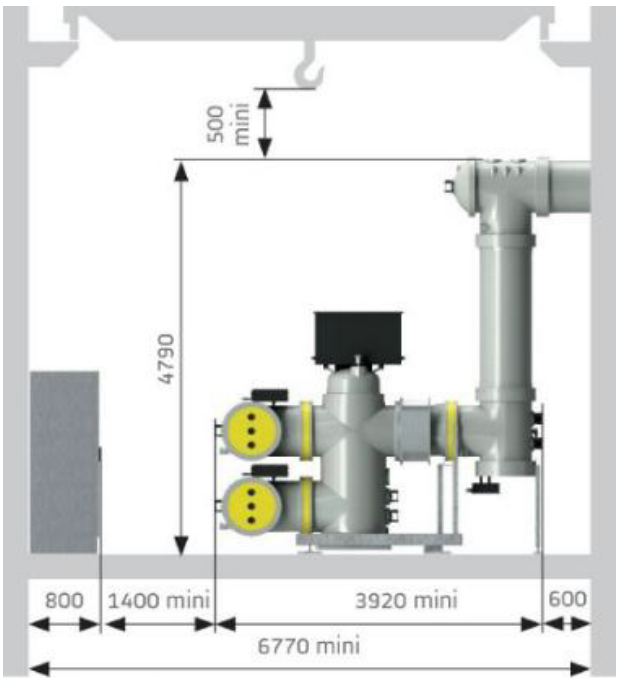
Bay width: 1 000 mm

Also available:

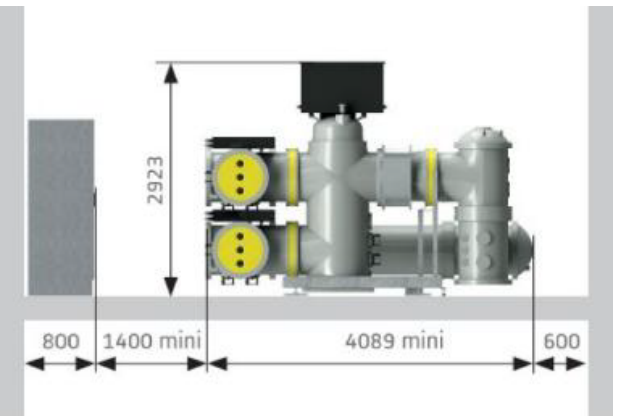
- Other single-line diagrams
- Standalone control cubicles
- Specific layouts



Line bay



Transformer bay



Bus coupler bay

Ratings

GENERAL		
Reference electrotechnical standards		IEC / IEEE
Voltage	kV	170
Withstand voltages Short-duration power-frequency, phase-to-earth / across isolating distance Lightning impulse, phase-to-earth / across isolating distance	 kV kVp	 325 / 375 750 / 860
Frequency	Hz	50 / 60
Continuous current	A	up to 4000
Short-time withstand current	kA	50
Peak withstand current	kAp	125 / 130
Duration of short-circuit	s	3
Installation		indoor
Ambient temperature range	°C	down to -25 / up to +55

CIRCUIT-BREAKER		
First-pole-to-clear factor		1.5
Short-circuit breaking current	kA	50
Short-circuit making current	kAp	125 / 130
Operating sequence		0 - 0.3 s - CO - 3 min - CO / CO - 15 s - CO
Drive type (three-phase or single-phase)		pure-spring
Breaking time	ms	50
Closing time	ms	100
Mechanical endurance	class	M2
Capacitive switching	class	C2

DISCONNECTOR AND LOW-SPEED EARTHING SWITCH		
Capacitive current switching	A	0.1
Bus-transfer current switching capability	A / V	1600 / 10
Mechanical endurance	class	M2

MAKE-PROOF EARTHING SWITCH		
Making current capability	kAp	125 / 130
Switching capability - electromagnetic coupling	A / kV	80 / 2
Switching capability - electrostatic coupling	A / kV	3 / 9
Mechanical endurance	class	M1

Other data available on request.

For more information, visit
gevernova.com/grid-solutions

GEA-N50048-(E)
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