Grid Solutions

F35

Gas-Insulated Substations
72.5 kV, 31.5 kA, 2 500 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 72.5 kV for all applications: power generation, transmission, distribution, tertiary and industry.

Highest Availability

- Extensive experience and reliability with more than 4,500 bays installed in 67 countries
- Current transformers outside gas
- Pure-spring circuit-breaker drives

Short Site Works

- Up to 3 bays assembled together, wired, tested and shipped to site
- Simple on-site testing thanks to disconnecting function of voltage transformer and surge arrester

Operational Safety

- Drives and accessories within easy reach

Modular and Versatile

- Applicable in wind farms, urban and industrial substations
- High modularity enables complex layouts in a compact arrangement

Lowest Cost of Land and Civil Works

- Bay volume reduced by
  - 23% compared to previous design
  - 40% compared to 145 kV
- Compact GIS bay width of only 0.68 m

Smart Grid Features

- Full-digital monitoring, control and protection

Low Environmental Impact

- First-in-class sealing system
- Gas monitoring system BWatch
- Designed for g^3 application

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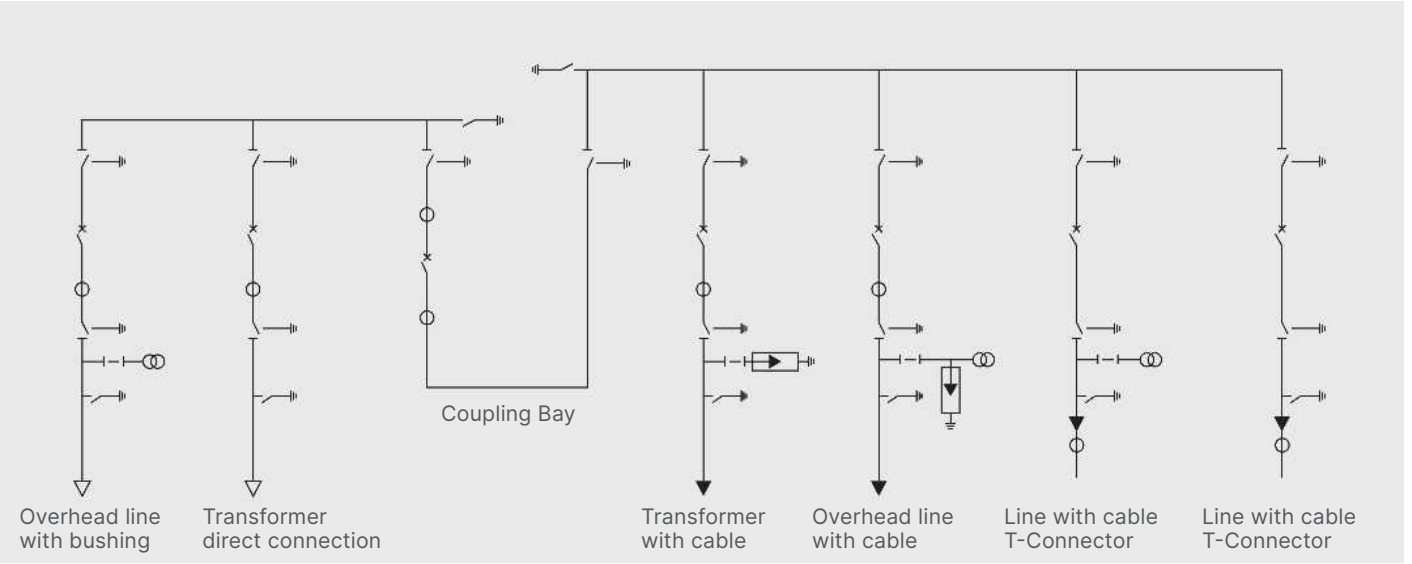
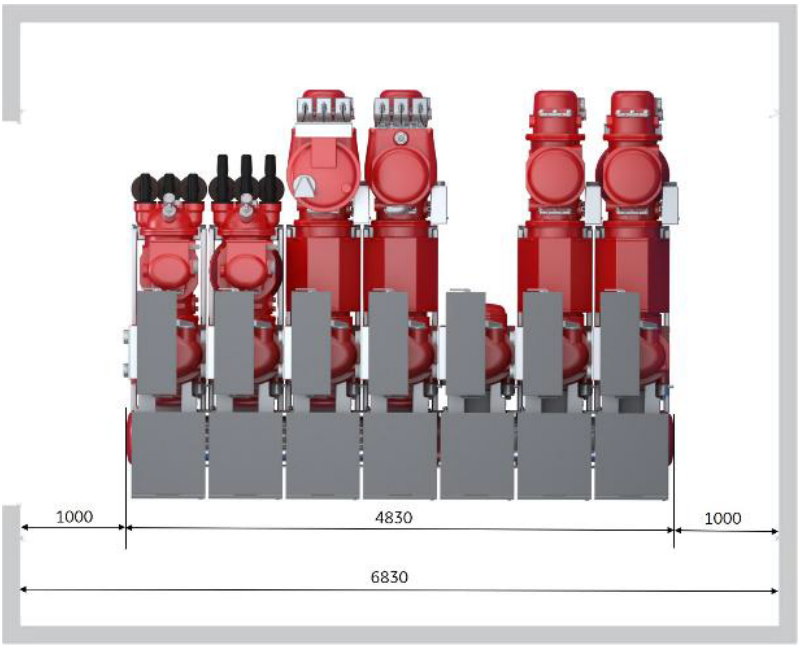
F35 - 72.5 kV, 31.5 kA, 2 500 A - Single busbar diagram

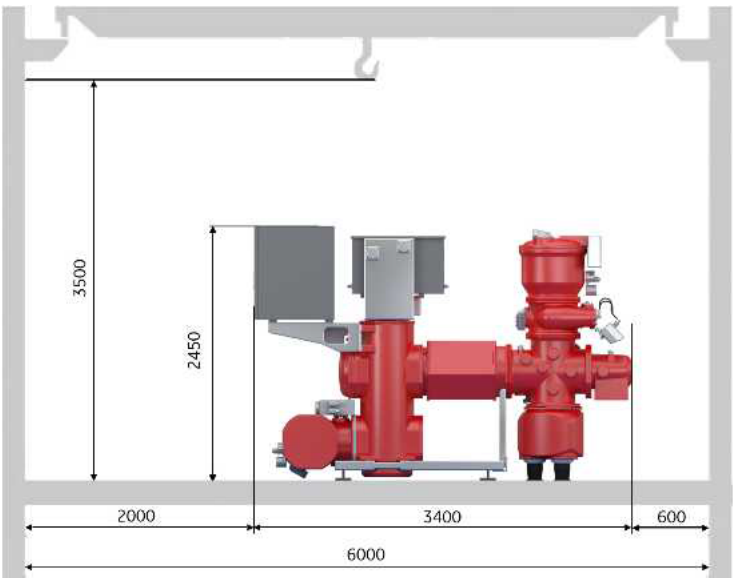


Bay width: 680 mm

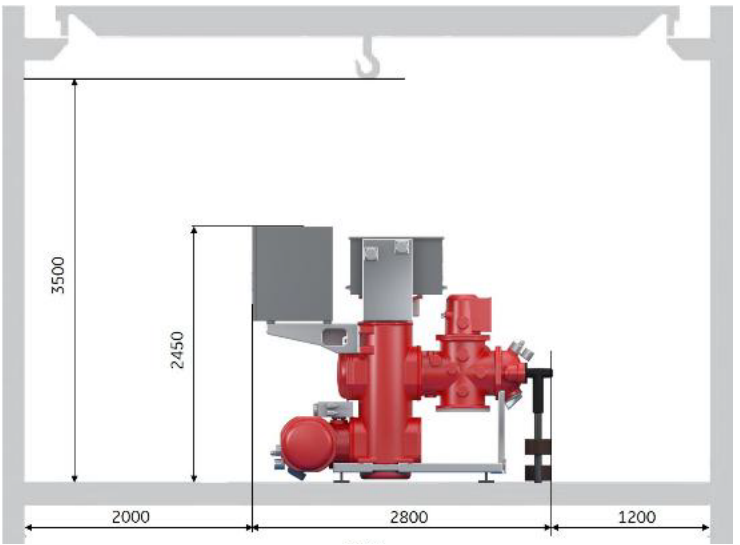
Also available:

- Other single-line diagrams
- Stand-alone control cubicles
- Specific layouts





Bay with cable box



Bay with T-connectors

Ratings

GENERAL		
Reference electrotechnical standards		IEC / IEEE
Voltage	kV	72.5
Withstand voltages		
Short-duration power-frequency, phase-to-earth / across isolating distance	kV	140 / 160
Lightning impulse, phase-to-earth / across isolating distance	kVp	325 / 375
Frequency	Hz	50 / 60
Continuous current	A	up to 2500
Short-time withstand current	kA	31.5
Peak withstand current	kAp	85
Duration of short-circuit	s	3
Installation		indoor / outdoor
Ambient temperature range	°C	down to -30 / up to +55

CIRCUIT-BREAKER		
First-pole-to-clear factor		1.5
Short-circuit breaking current	kA	31.5
Short-circuit making current	kAp	85
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	70
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	85
Switching capability - electromagnetic coupling	A/ kV	80 / 2
Switching capability - electrostatic coupling	A/ kV	2 / 6
Mechanical endurance	class	M1

Other data available on request.

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

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English
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