



B105

Gas-Insulated Substations 245 kV, 50/63 kA, 3150/4000 A

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

GE's B105 GIS meet the challenges of networks up to 245 kV for all applications: power generation, transmission, distribution, tertiary and heavy industry.

High Availability

- Best experience and reliability data
- Current transformers outside SF₆
- Single-phase enclosures: no phase-to-phase fault
- Pure-spring circuit-breaker drives
- State-of-the-art maintenance isolating device: major repair and HV tests with no more than 1 bay down
- Outstanding accessibility: drives and accessories within easy reach

Short Site Works

- Complete bays assembled, wired, tested and shipped

Lowest Cost of Land and Civil Works

- Most compact GIS with single-phase enclosure only
- Bay footprint 40% below market average

Smart Grid Features

- Full-digital monitoring, control and protection

Low Environmental Impact

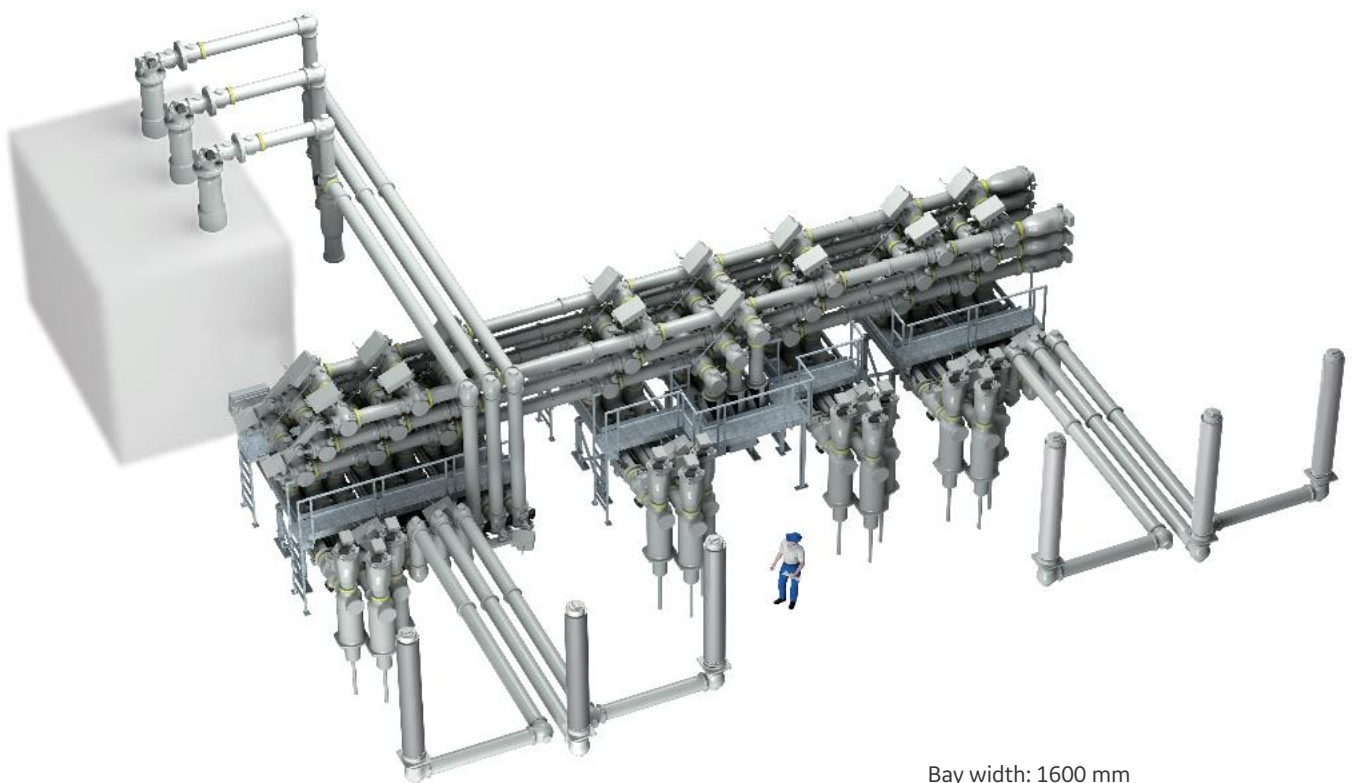
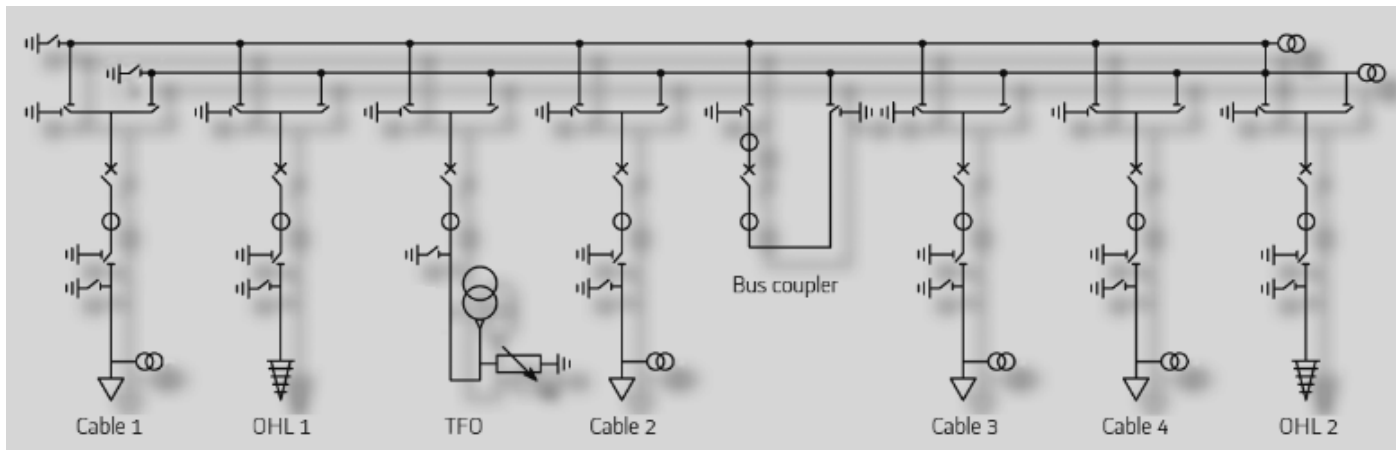
- Lowest gas weight on the market
- First-in-class sealing system and gas monitoring system BWatch

Customer Benefits

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



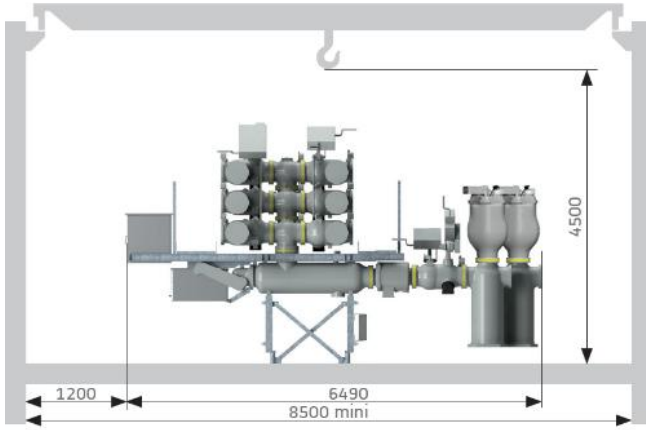
B105 - 245 kV, 50/63 kA, 3150/4000 A - Double Busbar Diagram



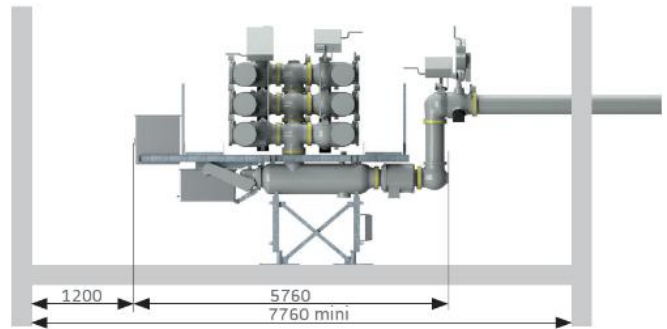
Bay width: 1600 mm

Also available:

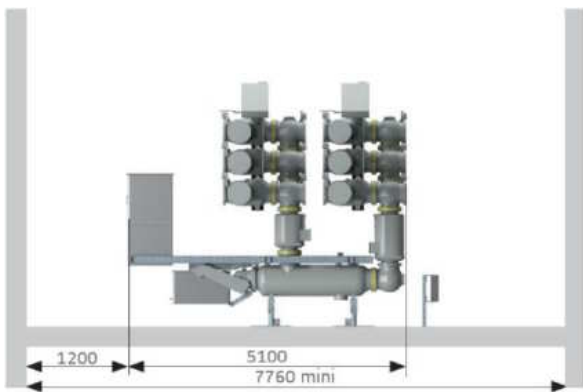
- Other single-line diagrams
- Standalone control cubicles
- Specific layouts



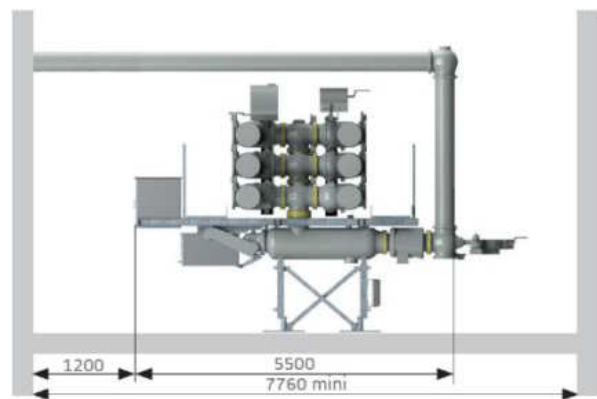
Cable bay



Overhead line bay

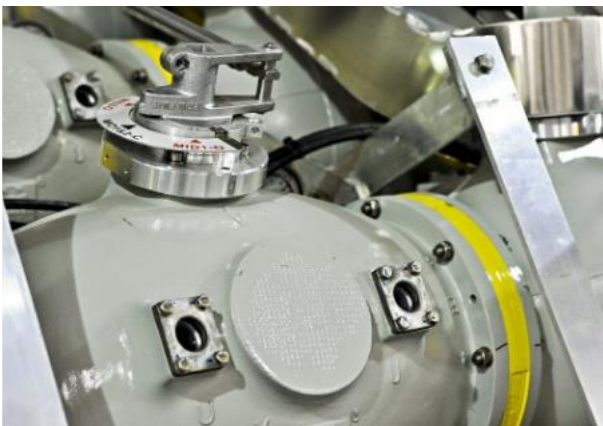


Bus coupler bay



Transformer bay

Maintenance Isolating Device



Highest Availability and Lowest MTTR

- Never more than one bay is shutdown, thanks to the additional gap between busbar disconnector and circuit-breaker
- In case of busbar disconnector failure, the corresponding bay can be operated until repair
- Extensions require no shutdown
- Operation requires no gas handling

Total Safety

- Pressurized gas barriers are not stressed
- A viewing port enables to ascertain contact position

Reliability

- All elements are HV-tested

Ratings

General

Reference electrotechnical standards		IEC
Voltage	kV	up to 245
Withstand voltages		
Short-duration power-frequency, phase-to-earth / across isolating distance	kV	460/530
Lightning impulse, phase-to-earth / across isolating distance	kVp	1050/1200
Frequency	Hz	50/60
Continuous current	A	3150/4000
Short-time withstand current	kA	50/63
Peak withstand current	kAp	135/170
Duration of short-circuit	s	3
Installation		indoor/outdoor
Ambient temperature range	°C	down to -25 / up to +55

Circuit-Breaker

First-pole-to-clear factor		1.3 - 1.5
Short-circuit breaking current	kA	50/63
Short-circuit making current	kAp	135/170
Operating sequence		O-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

Disconnecter and Low-Speed Earthing Switch

Capacitive current switching	A	0.25
Bus-transfer current switching capability	A/V	1600/20
Mechanical endurance	class	M2

Make-Proof Earthing Switch

Making current capability	kAp	135/170
Switching capability - electromagnetic coupling	A/kV	80/2
Switching capability - electrostatic coupling	A/kV	3/12
Mechanical endurance	class	M1

Other data available on request.

For more information please contact
GE
Grid Solutions

Worldwide Contact Center

Web: www.GEGridSolutions.com/contact
Phone: +44 (0) 1785 250 070

GEGridSolutions.com

IEC is a registered trademark of Commission Electrotechnique Internationale.

GE and the GE monogram are trademarks of General Electric Company.

GE reserves the right to make changes to specifications of products described at any time without notice and without obligation to notify any person of such changes.

B105_245kV-Brochure-EN-2021-06-Grid-GIS-1705. © Copyright 2021, General Electric Company. All Rights Reserved.

