

# T210

## Gas-Insulated Substations 800 kV, 50 kA, 5 000 A

GE's T210 GIS is a field-proven solution with high availability that meets the challenges of networks up to 800 kV for power generation and transmission.

The T210 is one of the most compact GIS solutions available at 800 kV with a footprint 65% below the market average. It is comprised of small, light components making it easy to handle.

The T210 is environmentally friendly and features one of the lowest gas weights on the market along with an advanced SF<sub>6</sub> sealing system. Full digital monitoring control and protection capabilities enable smart grid integration.

Building on GE's GIS experience of more than 50 years, the T210 provides high availability and current transformers outside SF<sub>6</sub>.

### Environment Friendliness

- Lowest gas weight on the market
- First-in-class SF<sub>6</sub> sealing system

### Highest Availability

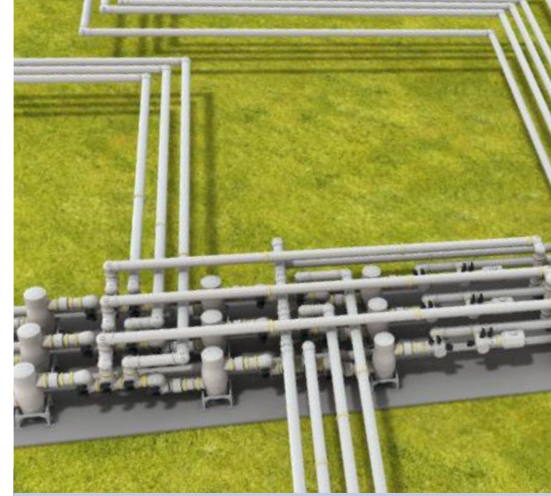
- Design grounded by 50 years old experience
- Current transformers outside SF<sub>6</sub>

### Lowest Costs of Land and Civil Works

- Most compact GIS: footprint 65 % below market average

### Shortest Site Works

- Light and small components, easy to handle



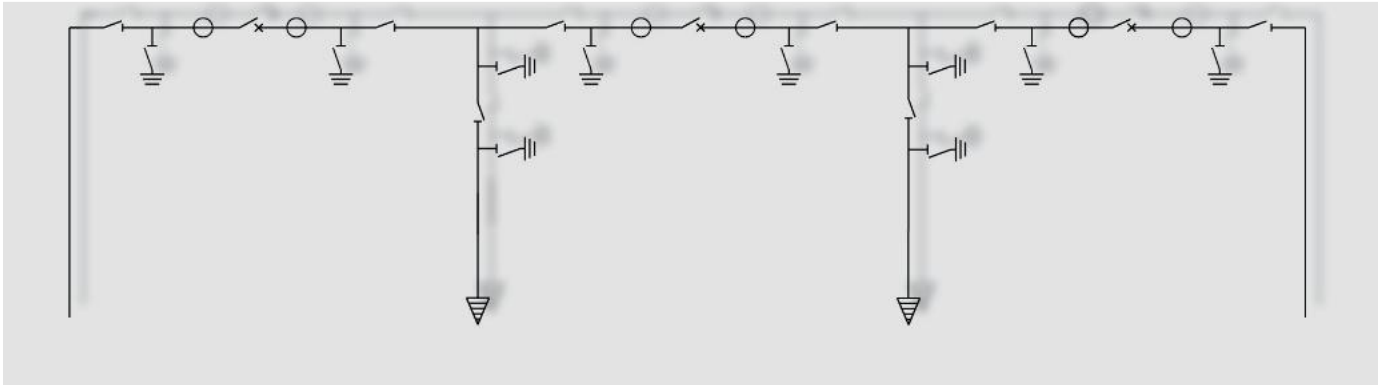
## Smartgrid Features

- Full-digital monitoring, control and protection

## Customer Benefits

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

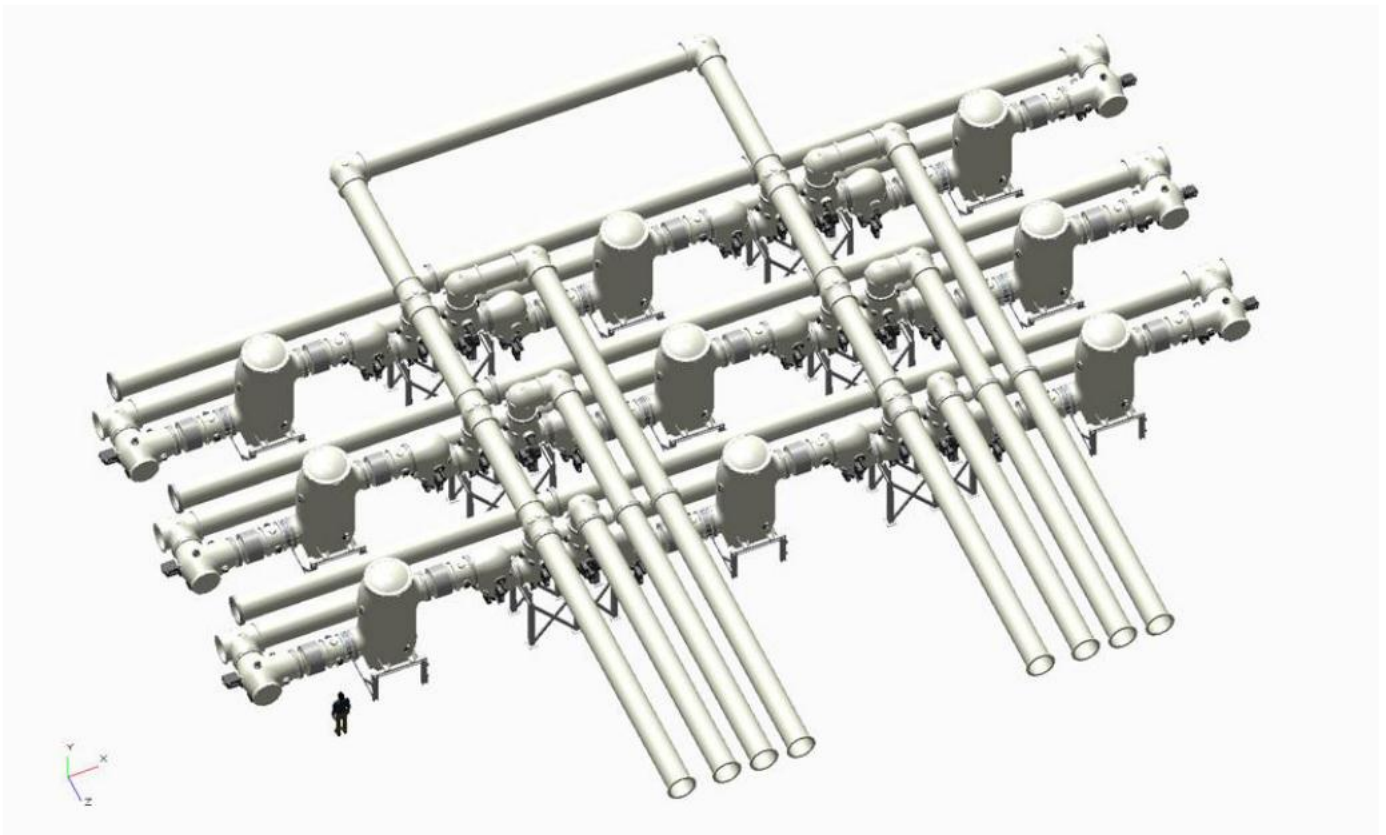
## T210 - 800 kV, 50 kA, 5 000 A - 1.5 Circuit-Breaker Diagram



Also available:

- Other single-line diagrams
- Specific layouts
- Any type of control

## Overview of an 800 kV GIS Diameter Including Auxiliary Bus



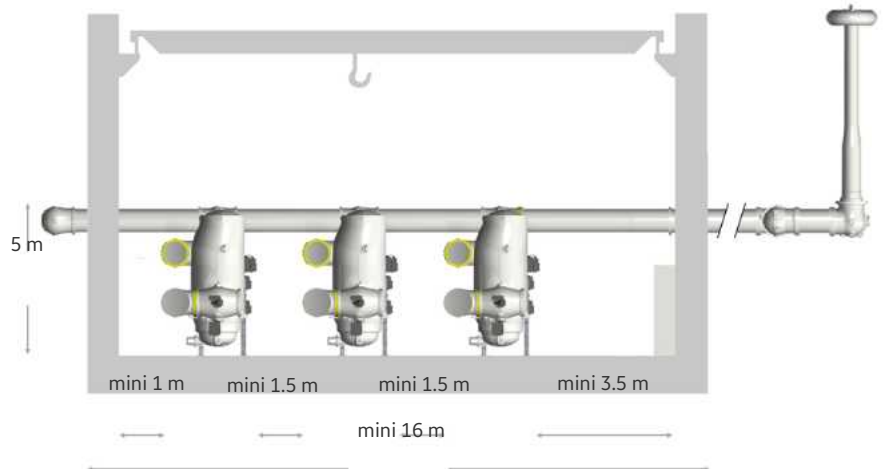
## Low Dimensions for High Customer Benefits

### Height

The substation is only 5 meter high. This is the lowest layout on the market.

### Footprint

A typical diameter requires less than 30 m by 11 m. This is the smallest footprint on the market.



## Accessibility and Safety

Compactness is not detrimental to accessibility. All drives, valves, monitoring devices and viewports are grouped and within easy reach. Large viewports are provided on all disconnectors and earthing switches so that the contact position can be checked by direct visual inspection.



Drives and accessories at reach from ground

## Experience

As a GIS pioneer in 800 kV GIS, GE delivered the first 800 kV substation in 1979. With 50 years of experience, Grid Solutions has provided more than 23,000 GIS bays of various voltages in 2,800 substations in the world.



800 kV substation installed in 1979

## Type Tests

T210 is type-tested according to latest IEC standards.



Voltage withstand and bus-charging current switching tests

## General Ratings

Reference electrotechnical standard		IEC
Voltage	kV	765 / 800
Withstand voltages		
Short-duration power-frequency, phase-to-earth / across open switching device	kV	960 / 1270
Switching impulse, phase-to-earth / across open switching device	kVp	1550 / 1200 (+653)
Lightning impulse, phase-to-earth / across open switching device	kVp	2100 / 2100 (+460)
Continuous current	A	5000
Short-time withstand current	kA	50
Peak withstand current	kAp	125

## Circuit-breaker Ratings

First-pole-to-clear factor		1.3
Short-circuit breaking current	kA	50
Short-circuit making current	kAp	125
Breaking time	ms	<45
Pre-insertion resistor rating	$\Omega$	>340
Mechanical endurance	class	M2

## Disconnecter Ratings

Bus-transfer current switching capability	A/V	1600 / 40 (3200 / 300 option)
Mechanical endurance	class	M2

*Other data available on request.*

For more information please contact  
GE Power  
Grid Solutions

### Worldwide Contact Center

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

## GEGridSolutions.com

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