Fixed-Mounted Circuit-Breaker Switchgear Type 8DJH ST E up to 12kV, Gas-Insulated

Medium-Voltage Switchgear – Catalog SI-DS-8DJH ST E-003

siemens.com/medium-voltage-switchgear

SIEMENS

Fixed-mounted circuit-breaker switchgear 8DJH ST E is a factory-assembled, type-tested, three-pole, metal-clad, SF6 insulated switchgear for single busbar applications.

8DJH ST E switchgear is used in primary power distribution for Utilities, Switching substations, Infrastructure and Industrial applications e.g. in

- Automotive
- Buildings and Commercial installations
- Cement
- Chemicals
- Food and beverages
- Mining
- Pharmaceuticals
- Power Utilities
- Pulp & Paper
- Shipbuilding

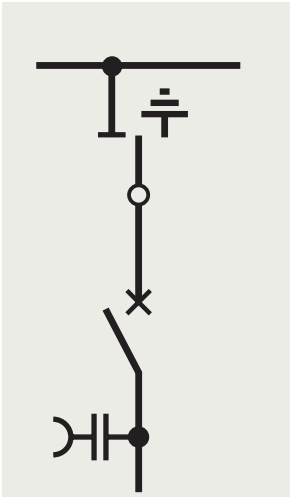
Compactness, reliability, climatic independence and cost efficiency add to the central aspects of gas-insulated medium voltage switchgear from Siemens in order to provide future proof investment: optimal personal and functional safety as well as reliable, maintenance free operation.

Technical data	
Rated voltage	12 kV
Rated frequency	50 Hz
Rated short-duration power-frequency withstand voltage	28 kV[1)]
Rated lighting impulse withstand voltage	75 kV[1)]
Rated peak withstand current	65.75 kA
Rated short-circuit making current	65.75 kA
Rated short-time withstand current 3s	26.3 kA
Rated short-circuit breaking current	26.3 kA
Rated normal busbar current	1250 A*
Rated normal feeder current	1250 A
Degree of protection	Gas vessel : IP67 Switchgear enclosure : IP4X
Partition class	PM
Loss of service continuity	LSC 2
Internal arc classification	IAC A FLR 26.3kA, 1s
Dimensions	
Width	500 mm
Depth	1100 mm
Height	2550 mm

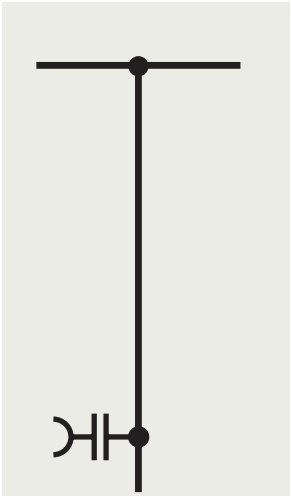
1) BIL 38kV/95kVp available optionally

* Please contact local sales offices for the available versions & ratings

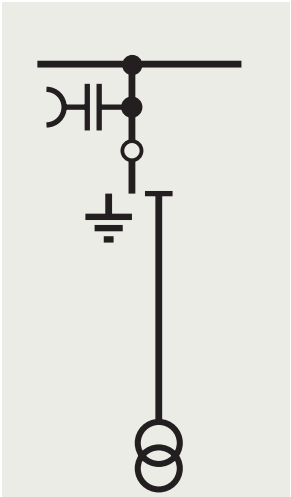
Benefits	Features
Compact design	• Use of SF6 insulation leads to compact design • Existing switchgear rooms may be used effectively • Reduced costs for new construction • Lesser footprint leads to saving of space in costly city area
Environmental independence	• The enclosed high-voltage part of 8DJH ST E switchgear is suitable for applications under aggressive ambient conditions, such as saline, humid, dust and condensation • It is tight to ingress of foreign objects, such as dust, pollution and rodents
Maintenance-free design	• Switchgear housings are having sealed-for-life design according to IEC 62271-200 (sealed pressure system) which gives maintenance-free switching devices • Ensures maximum supply reliability • Reduced operating costs
Innovation	• Use of digital secondary systems as well as combined protection and control devices • Ensures clear integration in process control systems • Flexible and highly simplified adaptation to new system conditions and thus to cost-efficient operation
Personal safety	• Safe-to-touch • Capacitive voltage detecting system to verify safe isolation from supply • Operating mechanisms and auxiliary switches safely accessible outside the primary enclosure (switchgear housings) • Due to the system design, operation is only possible with closed switchgear enclosure • Standard degree of protection IP 67 for all high-voltage parts of the primary circuit, IP 4X for the switchgear enclosure according to IEC 60529 • High resistance to internal arcs • Panels tested for resistance to internal faults up to 26.3kA for 1 sec • Make-proof earthing by means of the vacuum circuit-breaker
Security of operation	• Hermetically sealed primary enclosure independent of environmental effects (pollution, humidity and rodents) • Maintenance-free in an indoor environment according to IEC 62271-1 • In isolated or compensated systems, low earth-fault currents are self-extinguishing • Inductive voltage transformers and ring core current transformers mounted outside the SF6 switchgear housings • Bolted switchgear housings • Minimum fire load • Option: Aseismic design
Reliability	• Type and routine-tested • Standardized, NC production processes • Quality assurance in accordance with DIN EN ISO 9001
Service life	• Under normal operating conditions, the expected service life of gas-insulated switchgear 8DJH ST E is at least 25 years • Expected up to 35 to 40 years, taking the tightness of the enclosed high-voltage part into account



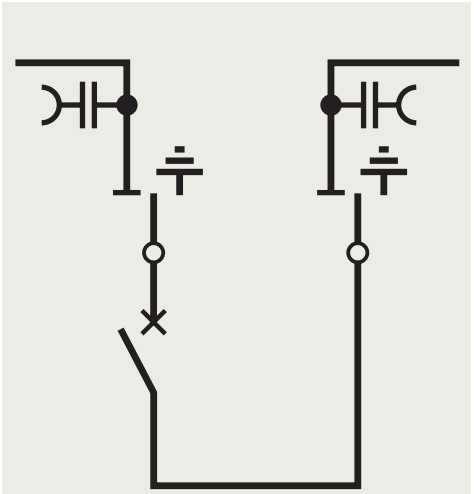
Circuit breaker panel



Cable connection panel



Bus metering panel



Bus sectionalizer & riser panel

General

- Metal-enclosed, three-pole primary enclosure
- Welded switchgear vessel, made of stainless steel, with welded-in bushings for electrical connections and mechanical components
- SF6 as an insulating gas
- Maintenance-free components under normal ambient conditions according to IEC 62271-1 and VDE 0671-1
- Three-position switch-disconnector with make-proof earthing function in conjunction with CB
- Vacuum circuit-breaker
- Wall-standing or free-standing arrangement
- Cable connection access from front & rear [optional]
- Installation and extension of existing switchgear at both ends without gas work and without modification of existing panels
- Pressure relief to the rear upwards

Modular design

- Individual panels can be lined up and extended at will – without gas work on site
- Low-voltage compartment available in 3 overall heights, wiring to the panel via plug connectors

Interlocks

- Design according to IEC 62271-200
- Logical mechanical interlocks and the constructive features of the three-position switches prevent maloperation as well as access to the cable connection of the feeders under live conditions
- Impermissible and undesired operations can be prevented by means of locking devices on the switching devices

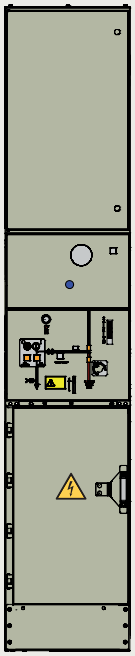
Instrument transformers

- Current transformers are free from dielectric stresses
- Easy replacement of current transformers designed as ring-core transformers
- Cast resin voltage transformers enclosed in cable compartment

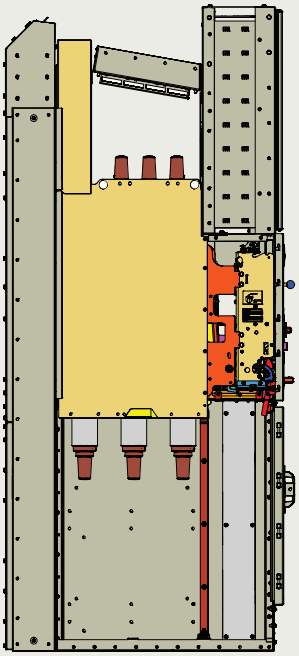
Vacuum circuit-breaker

- Maintenance-free under normal ambient conditions according to IEC 62271-1
- No relubrication or readjustment
- Up to 10,000 operating cycles
- Vacuum-tight for life

Circuit breaker panel

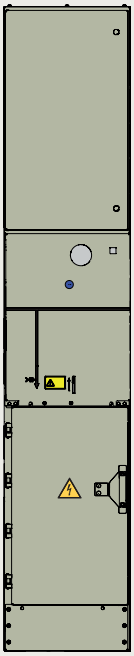


Front



Side

Cable connection panel



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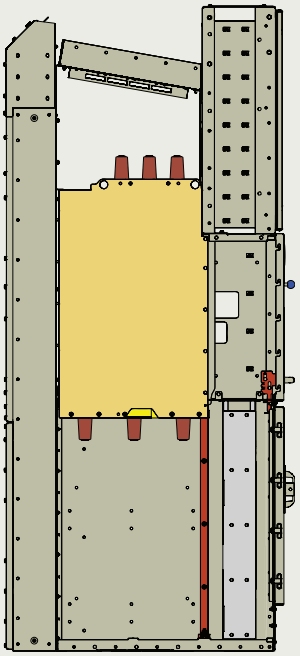
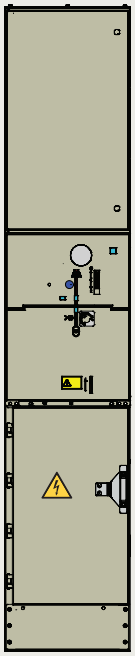


Side

Bus metering panel



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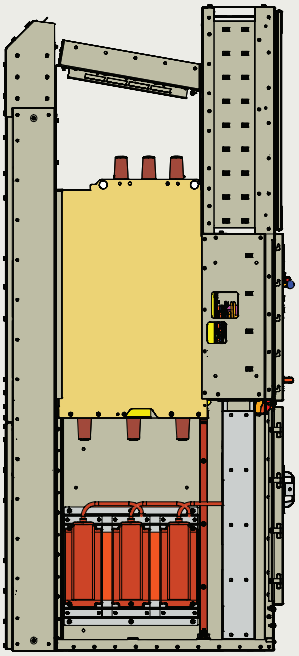

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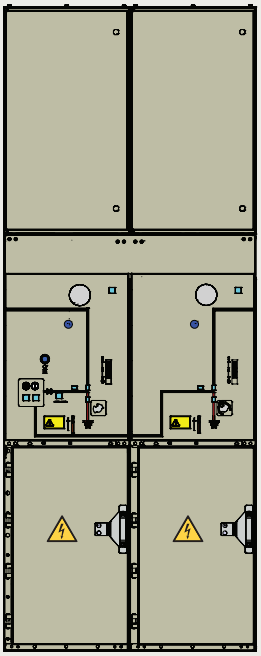
Bus sectionalizer & riser panel



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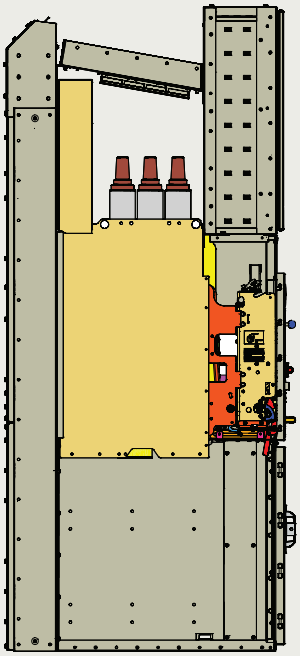

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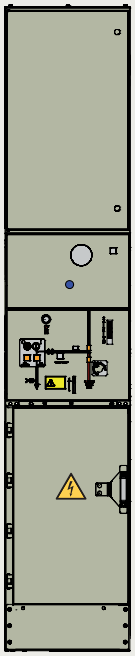
Circuit breaker panel



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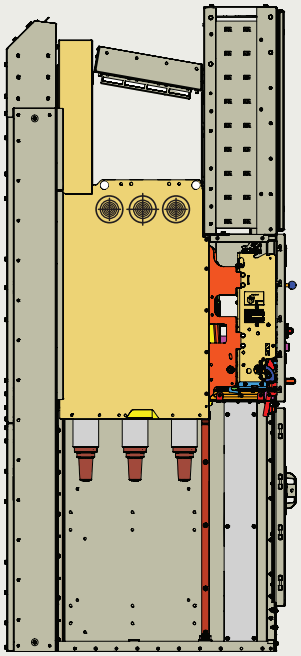
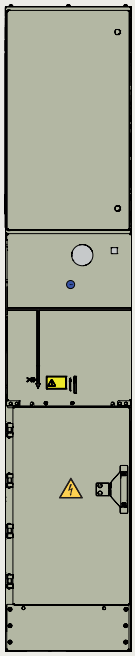


Side

Cable connection panel



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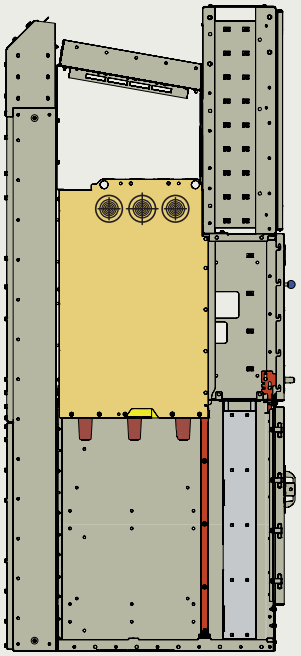
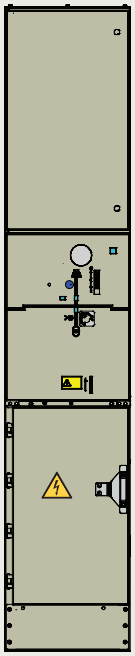


Side

Bus metering panel



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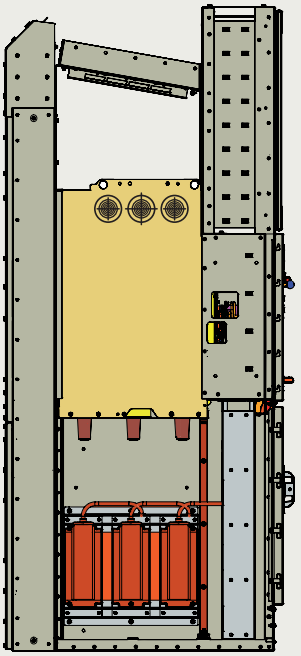

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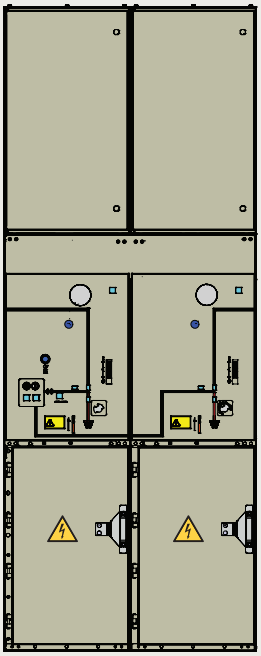
Bus sectionalizer & riser panel



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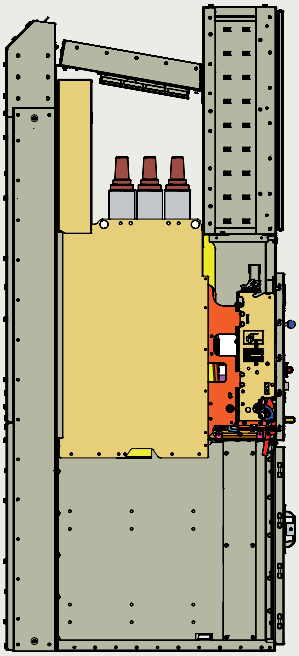

Side

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SI-DS-8DJH ST E-003
(This replaces EM-MS-8DJH-ST-E-002)

www.siemens.com/mediumvoltage

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