

DT1-245P

Dead Tank Circuit Breaker for 245 kV

Circuit breakers are key to ensuring network reliability and safety in your substation. The DT1-245P is the industry standard for 40 kA applications.

Range

The field proven interrupter chamber with double-motion technology utilizes the energy optimized, self-blast principle. This proven technology dramatically reduces the mechanical stress in the chamber, enabling a higher interrupting capability with a lower operational energy requirement.

The DT1-245P is available for single pole operation (IPO) or for three-pole gang operation. The standard temperature application for low temperature areas is -30 °C without any heating systems. By utilizing tank heaters, the DT1-245 P can be installed in regions with temperatures as low as -60 °C.

Spring-Spring Mechanism

The reduced energy requirements of the breaking chamber allows for the utilization of the world class FK spring-spring mechanism. The combination of the proven FK drive mechanism and double-motion technology results in a significant reduction of reaction forces, thus reducing foundation design requirements.

Certified Quality

GE Vernova designs, manufactures, tests and delivers its circuit breakers in accordance with the latest IEEE/ANSI and IEC standards, maintaining a quality assurance system according to ISO 9001 and ISO 14001 certifications.

Installation and Maintenance

The DT1-245 series is factory tested and prepared for shipment with bushings assembled and prefilled with SF6 gas, therefore the on-site installation requires only a few simple steps without requiring any "special tools".

The DT1-245 circuit breaker range has lower maintenance costs and requirements, thanks to an engineering and design philosophy that has focused on these key needs since the inception of the development process.



Main Characteristics

- Advanced self-blast interrupters
- Leak resistant cast aluminum enclosures
- Durable low energy spring-operated mechanisms
- More than 100,000 circuit breakers with self-blast interrupters and FK spring-operated mechanisms in service since 1989

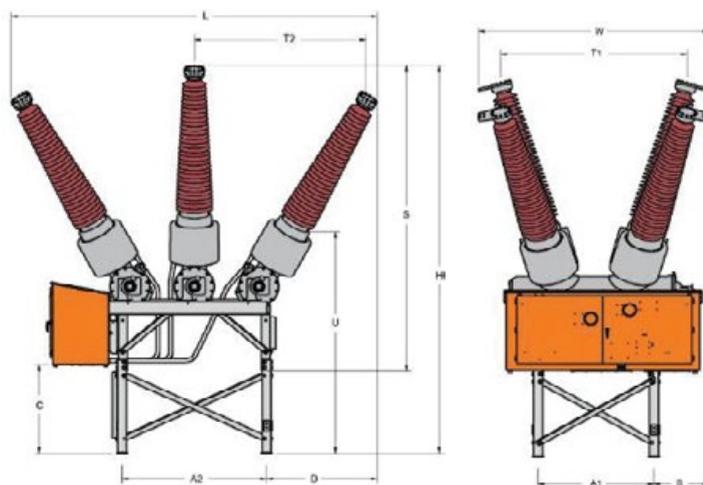
Key Benefits

- Field-proven reliability
- High performance up to 40 kA
- Fast and easy on-site installation
- Environmentally-friendly solution with reduced SF₆ gas volume



Dimension

DT1-245P	mm	in
A1	1,313	52
A2	1,683	66
B	626	25
C	1,044	41
D	1,288	51
H	4,551	179
L	4,258	168
S	3,577	141
T1	2,114	83
T2	1,997	79
U	2,591	102
W	2,591	102



Ratings

IEEE/ANSI	IEC	VALUE	UNITS
Rated maximum voltage	Rated voltage	245	kV
Rated power frequency	Rated frequency	50 / 60	Hz
Dry withstand	At power frequency: dry	425 / 460	kV
Rated lightning impulse withstand voltage	At lightning impulse	900 / 1,050	kV
Rated chopped wave impulse voltage 2us		1,160	kV
Rated continuous current	Rated normal current	3,000 / 4,000	A
Rated short-circuit current	Rated short-circuit breaking current	40	kA
Rated closing, latching and short time carrying current		104	kA
	Rated short-circuit making current	104	kA
Rated capacitance switching*			
Rated interrupting time		3	cycles
	Rated break time	50	ms
Rated standard operating duty		O-0,3s-CO-15s-CO	

*Ratings available upon request.

**Contact GE Vernova for special purpose, high TRV, high X/R or other rating requirements.

Technical Data

	VALUE	UNITS
Ambient temperature range*	-30 to +40	degree C
Seismic withstand in accordance with IEEE 693-2005		
Creepage distance	168 / 4,200	inches / mm
Closing resistor (optional)		
Weight (without current transformers)	6,680 / 3,030	lbs / kg
Weight of SF ₆	143 / 65	lbs / kg

* Alternate values upon request.

Gas Data

The functioning of this equipment relies upon SF₆, a fluorinated greenhouse gas.

	SF ₆
Average mass of gas/mixture in the equipment (kg)*	72.2
GWP ₁₀₀ of gas/mixture (CO ₂ -equivalent)	24,300
CO ₂ -eq of gas/mixture in the equipment (t _{co2-eq})*	1,754.5

* For information purposes only. It varies depending on the equipment considered.

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

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