DISTIBUTION SOLUTIONS

GSx vacuum circuit breaker range

Single-phase indoor vacuum breaker with magnetic actuator for railway power supply

The GSx II range is the first commercially available single-phase vacuum circuit breaker for railway power supply applications to feature a vacuum interrupter, magnetic actuator and electronic controller. This solution is robust, reliable and essentially maintenance-free.

Key features

- Innovative solution using a magnetic actuator and electronic control, combined with vacuum interrupting technology
- Available in single- (1x25 kV, 1x15 kV) and two-phase (2x25 kV and 2x15 kV) configurations (on request)
- Available for 16.7 (25) Hz and 50 (60) Hz networks
- Integrating configurable set of functions (under voltage release, anti-pumping, lock in open position, local/remote mode, etc.)
- Suitable for new installations, refurbishments and upgrades
- Intended for indoor installations, insulated in air e.g. panels, shelters, containers
- Deliverable as loose product, or mounted on trolley with or without current transformer

Customer benefits and savings

- Easy to interface, adapt and integrate into new or existing installations
- Fit for upgrades of legacy substations to latest interrupting technology
- Reduction of design/redesign time
- Easy to install and commission
- No need for mechanical adjustment
- Low overall power demand
- Minimal maintenance costs
- Fewer moving parts
- No need for SF_6 inventory or control

ABB as your competitive edge

- More than 100 years of expertise in rail best practices interrupting technology
- Dedicated team of rail professionals
- Global supplier with global footprint
- Proven track record with many customer references worldwide
- All equipment manufactured internally by ABB with full monitoring and control of the entire design, production and delivery process
- Unrivalled level of engineering support and after-sales service

Circuit breaker		GSH 5960	R36 SHUNT	GSR 5954	R40 SHUNT
Standards		IEC 62271-100	-	IEC 62271-100	-
		EN 50152-1	-	EN 50152-1	-
Rated voltage	U_{Ne} [kV]	17,25	17,25	27,5	27,5
Rated insultation voltage	Un [kV]	15	15	25	25
Withstand voltage at 50 Hz	Ud (1 min) [kV]	50	50	95	95
Withstand voltage at 50 Hz for electromagnet, electronics and wiring to earth	(1 min) [kV]	2	2	2	2
Impulse withstand voltage	Up [kV]	125	125	200	200
Rated frequency	fr [Hz]	16,7	16,7	50	50
Rated normal current (40 °C)	Ir [A]	2500	2500	2000	2000
Rated breaking capacity (rated symmetrical short-circuit current)	Isc [kA]	40	-	25	25
Rated short-time ammissibile withstand current (3s)	Ik [kA]	40	31,5	25	25
Making capacity	Ip [kA]	100	-	63	-
Operation sequence		O-5s-CO*	-	O-0.3s-CO-60s-CO	-
Opening time	[ms]	15...17	-	25…45	-
Arcing time	[ms]	15	-	15	-
Total interruption time	[ms]	30...32	-	40…60	-
Closing time	[ms]	45...70	-	45…70	-
Mechanical operations (cycles)	M2	... 10,000	-	... 10,000	-
Electrical operations (cycles)	Rated current	... 20,000	-	... 20,000	-
	Under short-circuit	... 50	-	... 50	-
Overall dimensions	H [mm]	1731	1731	1731	1731
	L [mm]	660	660	660	660
	P [mm]	1104	1104	1170	1170
Weight	[kg]	275	200	275	250
Standardised table of dimension	1VSR	715960	515730	745954	520104
Operating temperature	[°C]	– 5 ... + 40			
Tropicalisation		IEC: 60068-2-30			
		721-2-1			
Electromagnetic compatibility		IEC 62271-100			

* For other switching cycles contact ABB

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More product information:
abb.com/mediumvoltage
Your contact center:
abb.com/contactcenters
More service information:
abb.com/service

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