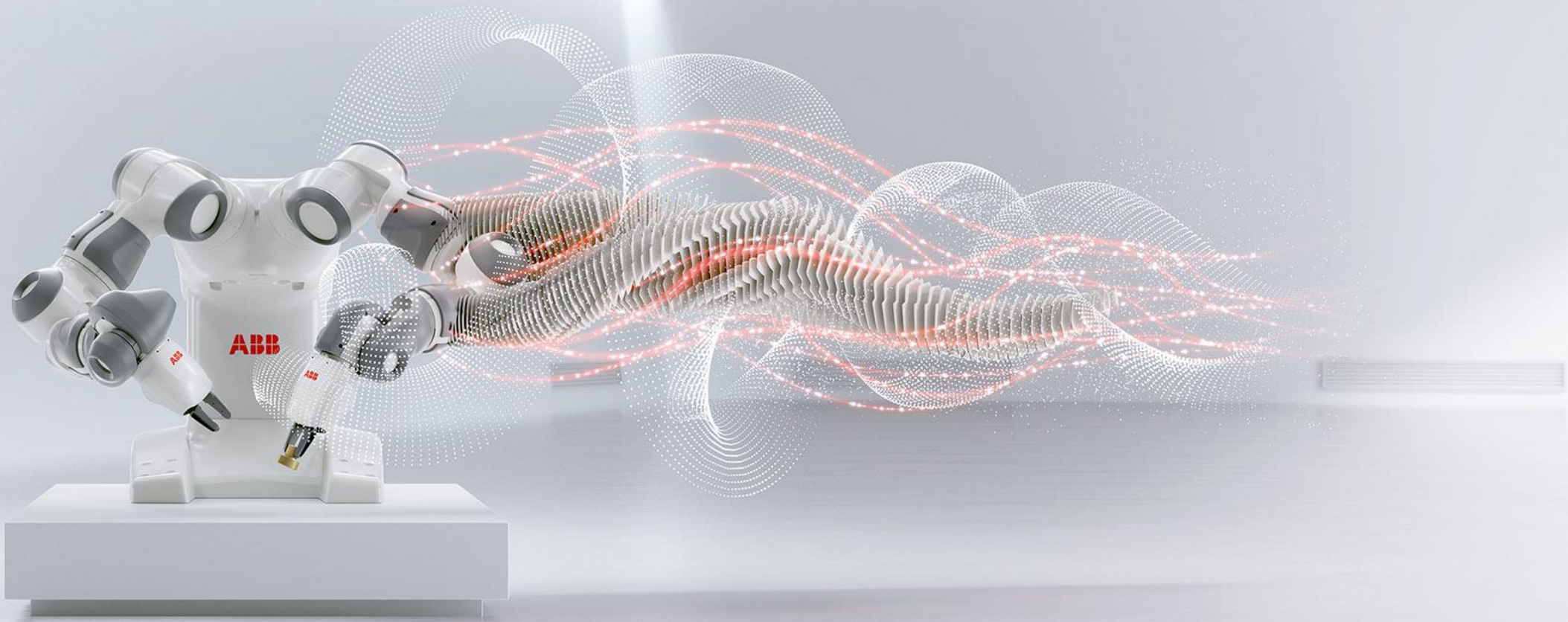


ELDS INDOOR CONTROL AND PROTECTION PRODUCTS

VD4G and ADVAC© G family

Small footprint, full protection for Generator Applications

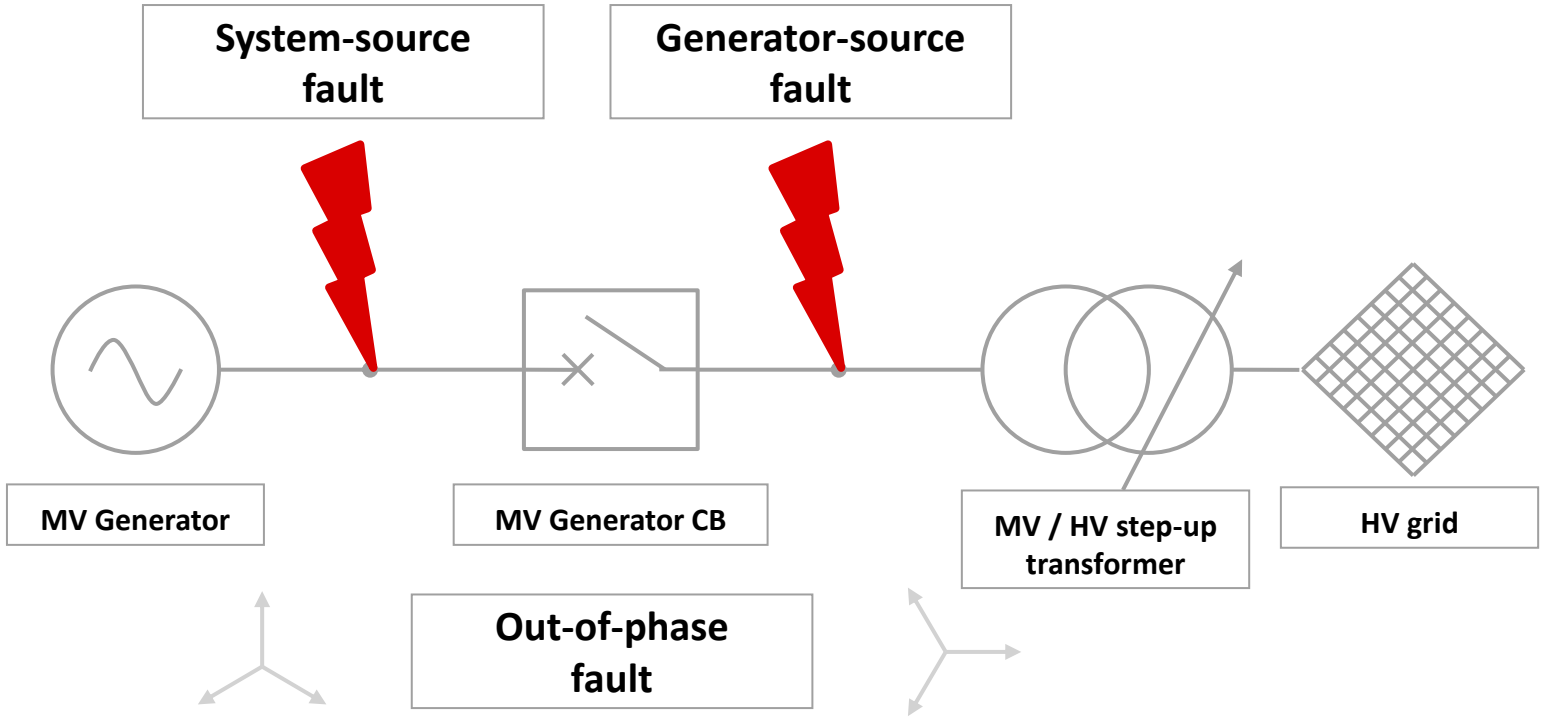
Field of application

Generator plant

Specialized application

- More types of fault likely to happen compared to a distribution network
- More severe electrical parameters involved

Challenging fault conditions



Dual Logo Standard

IEC Standard History vs. Today (since October 2015)

Specific Standard

- New standard IEC/IEEE 62271-37-013:

"This part of IEC 62271 is applicable to three-phase a.c. high-voltage **generator circuit-breakers**, hereafter called generator circuit-breaker, designed for indoor or outdoor installation and for operation at frequencies of **50 Hz and 60 Hz on systems having voltages above 1 kV and up to 38 kV**".

It is the only standard worldwide specifically relating to generator circuit-breakers.

New Standard scenario

Customer benefits

Key benefits at a glance

Productivity

- Ease of installation
- Speed up your projects
- Services and training

Efficiency

- Optimize logistic & return on investments
- Maximize plant productivity & network stability
- Minimize installation costs

Reliability

- Protect the assets in extreme conditions
- Safety and protection
- Be compliant with the current Global Dual Logo Standards

ABB solution

VD4G-63/50

Rated voltage: 15 kV	System-fed fault	Generator-fed fault (2)	Out of Phase 90°
Breaking current (kArms)	63	50/37	31.5
Degree of asymmetry (%)	75 (1)	110/130	75
E_2 (kVpeak)	27.6	27.6	39.0

(1) based on DC time constant of 133 ms and opening time of 30 ms
(2) Class G1 as per the classification of IEC/IEEE 62271-37-013

- Ir: 3150A (80 MVA)
- Ir: 4000A forced ventilation (100 MVA)
- ABB Panel: UniGear ZS1 (1000mm)
- Customized solution for special cubicle

ABB solution

VD4G-50/50

Rated voltage: 15 kV	System-fed fault	Generator-fed fault (2)	Out of Phase 90°
Breaking current (kArms)	50	50/37	25
Degree of asymmetry (%)	75 (1)	110/130	75
E_2 (kVpeak)	27.6	27.6	39.0

(1) based on DC time constant of 133 ms and opening time of 30 ms
(2) Class G1 as per the classification of IEC/IEEE 62271-37-013

- Ir: 3150A (80 MVA)
- Ir: 4000A forced ventilation (100 MVA)
- ABB Panel: UniGear ZS1 (1000mm)
- Customized solution for special cubicle

ABB solution

VD4G-50/25

Rated voltage: 15 kV	System-fed fault	Generator-fed fault (2)	Out of Phase 90°
Breaking current (kArms)	50	25	25
Degree of asymmetry (%)	75 (1)	110/130	75
E_2 (kVpeak)	27.6	27.6	39.0

(1) based on DC time constant of 133 ms and opening time of 30 ms
(2) Class G2 as per the classification of IEC/IEEE 62271-37-013

– Ir: 2000A (50 MVA)

– ABB Panel: Unigear ZS1 800mm (2000 A)

ABB solution

VD4G-40/25

Rated voltage: 15 kV	System-fed fault	Generator-fed fault (2)	Out of Phase 90°
Breaking current (kArms)	40	25	20
Degree of asymmetry (%)	75 (1)	110/130	75
E_2 (kVpeak)	27.6	27.6	39.0

(1) based on DC time constant of 133 ms and opening time of 30 ms
(2) Class G2 as per the classification of IEC/IEEE 62271-37-013

- Ir: 2000A-3150A (50-80 MVA)
- Ir: 4000A forced ventilation (100 MVA)
- ABB Panel: Unigear ZS1 800mm (2000 A)

UniGear ZS1 1000mm (3150 A)

Retrofit: OneFit 685 mm wide module (2000 A)

ABB solution

VD4G-25/16

Rated voltage: 15 kV	System-fed fault	Generator-fed fault (2)	Out of Phase 90°
Breaking current (kArms)	25	16	12.5
Degree of asymmetry (%)	75 (1)	110/130	75
E_2 (kVpeak)	27.6	27.6	39.0

(1) based on DC time constant of 133 ms and opening time of 30 ms
(2) Class G2 as per the classification of IEC/IEEE 62271-37-013

– Ir: 1250A (30 MVA)

– ABB Panel: Unigear ZS1 650 mm

Retrofit: OneFit (535 mm wide module)

ABB solution

ADVAC® G63/50

Rated voltage: 15 kV	System-fed fault	Generator-fed fault (2)	Out of Phase 90°
Breaking current (kArms)	63	50/37	31.5
Degree of asymmetry (%)	75 (1)	110/130	75
E_2 (kVpeak)	27.6	27.6	39.0

(1) based on DC time constant of 133 ms and opening time of 30 ms
(2) Class G1 as per the classification of IEC/IEEE 62271-37-013

- Ir: 3000A (80 MVA)
- Ir: 4000A forced ventilation (100 MVA)
- ABB Panel: SafeGear HD

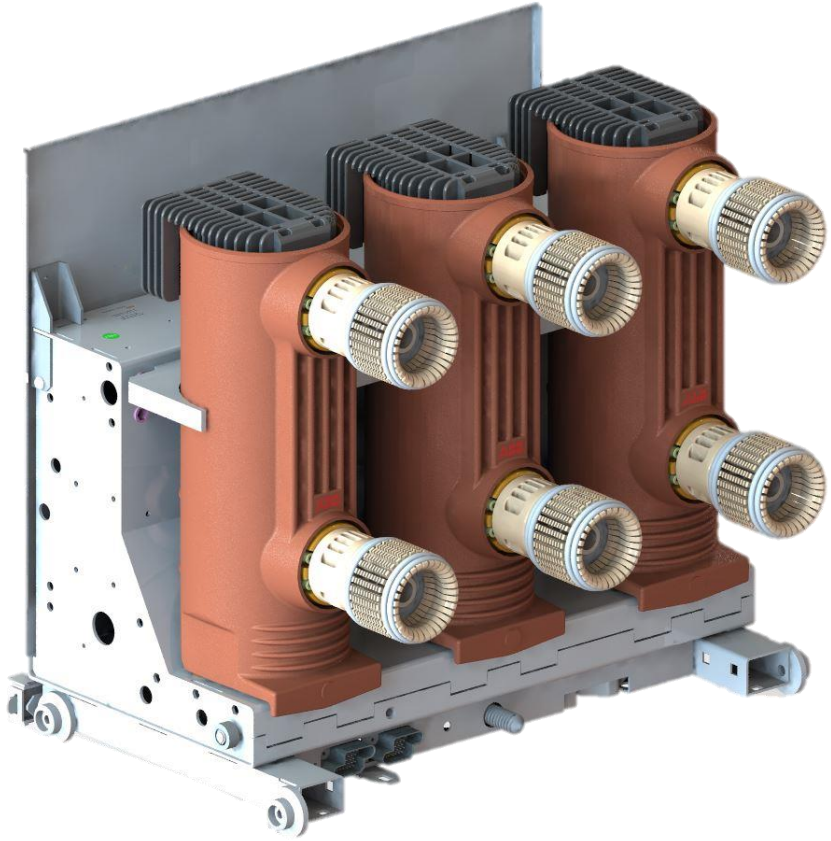
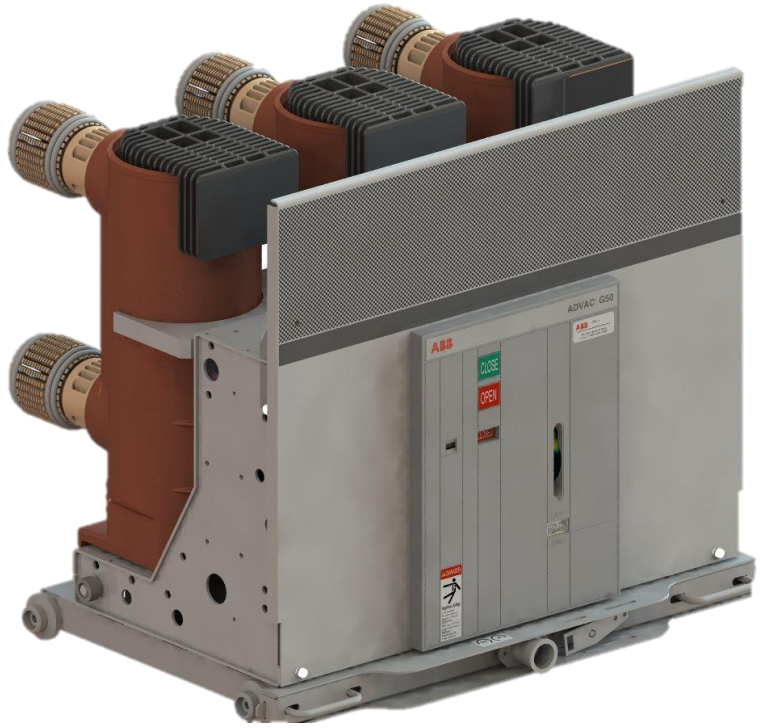


ABB solution

ADVAC® G50/50

Rated voltage: 15 kV	System-fed fault	Generator-fed fault (2)	Out of Phase 90°
Breaking current (kArms)	50	50/37	25
Degree of asymmetry (%)	75 (1)	110/130	75
E_2 (kVpeak)	27.6	27.6	39.0

(1) based on DC time constant of 133 ms and opening time of 30 ms
(2) Class G1 as per the classification of IEC/IEEE 62271-37-013



- Ir: 1200A, 2000A, 3000A (80 MVA)
- Ir: 4000A forced ventilation (100 MVA)
- ABB Panel: ADVANCE, SafeGear, SafeGear HD

ABB solution

ADVAC® G40/25

Rated voltage: 15 kV	System-fed fault	Generator-fed fault (2)	Out of Phase 90°
Breaking current (kArms)	40	25	20
Degree of asymmetry (%)	75 (1)	110/130	75
E_2 (kVpeak)	27.6	27.6	39.0

(1) based on DC time constant of 133 ms and opening time of 30 ms
(2) Class G2 as per the classification of IEC/IEEE 62271-37-013

- Ir: 1200A, 2000A, 3000A (80 MVA)
- Ir: 4000A forced ventilation (100 MVA)
- ABB Panel: ADVANCE, SafeGear

Contact

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