



ABB AG - EPDS

FC-Protector®

Innovative fault current limiter for indoor and outdoor applications



Agenda

Short-circuit challenge

New member of fault current limiter family

New power part

New control unit QR6-B

New control system

Wide range of applications

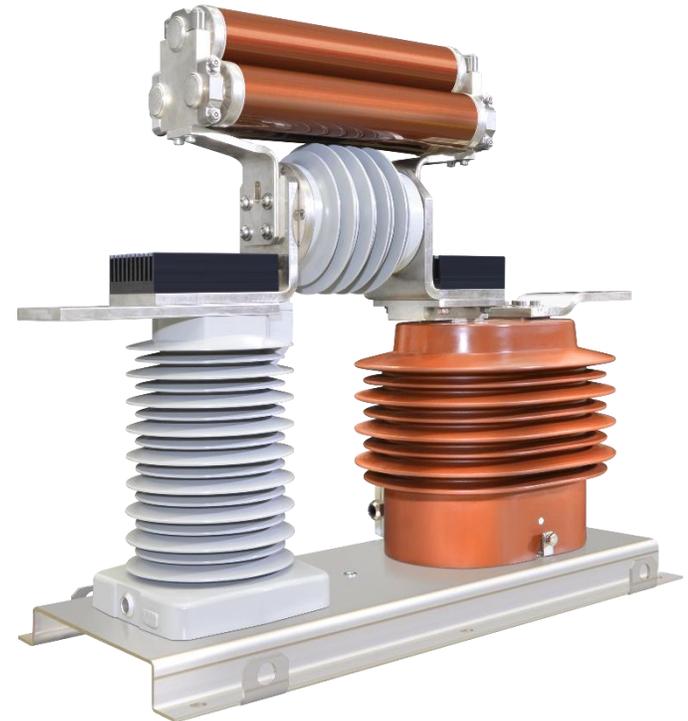
FC-Protector ... as a short-circuit solution

Applications

Technical data

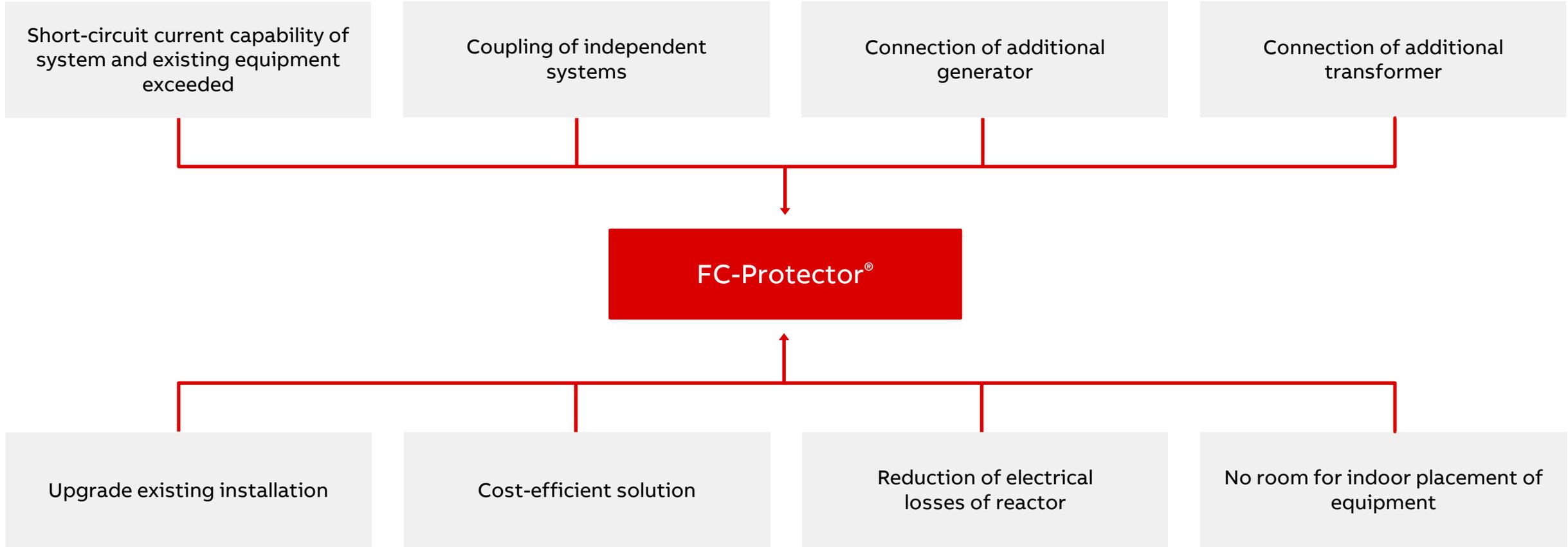
Unbeatable advantages

Summary



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Short-circuit challenge



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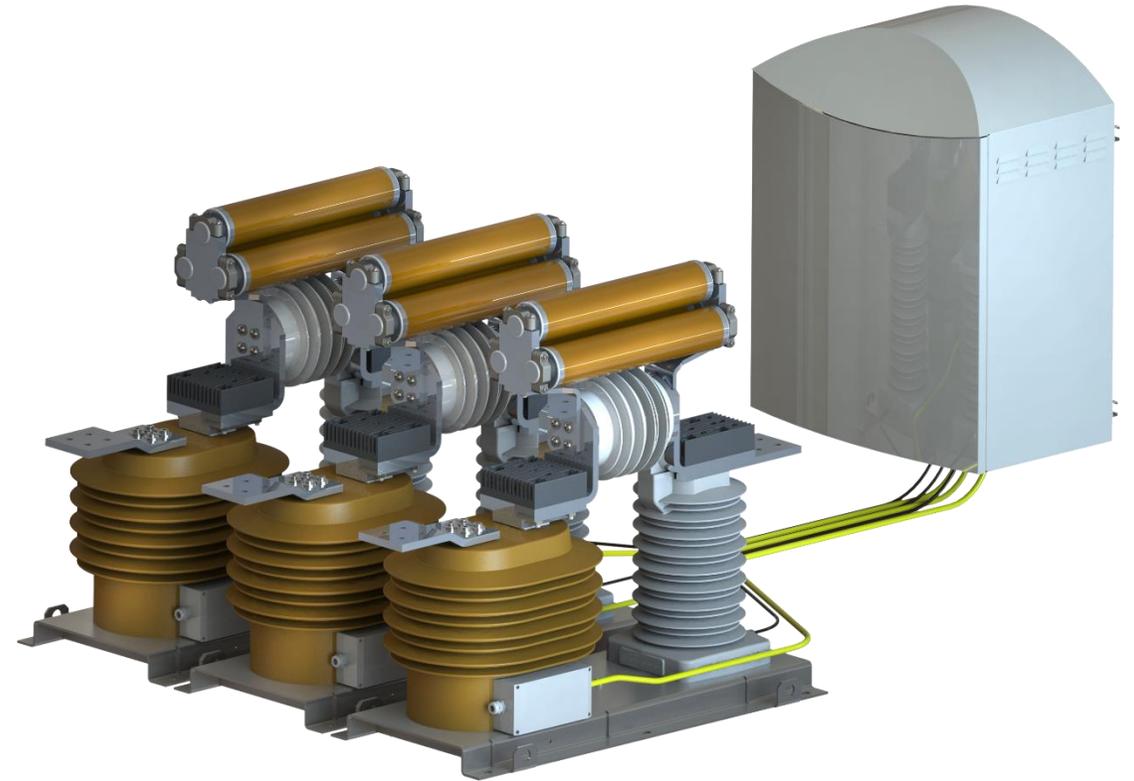
New member of fault current limiter family

ABB's solution for standard applications suitable for indoor and outdoor conditions

Solves short-circuit current problems in electrical networks before peak short-circuit current is reached

High mounting flexibility for wide range of indoor and outdoor applications

Reduced lead time due to standardized components and engineering process



FC-Protector[®]

New power part

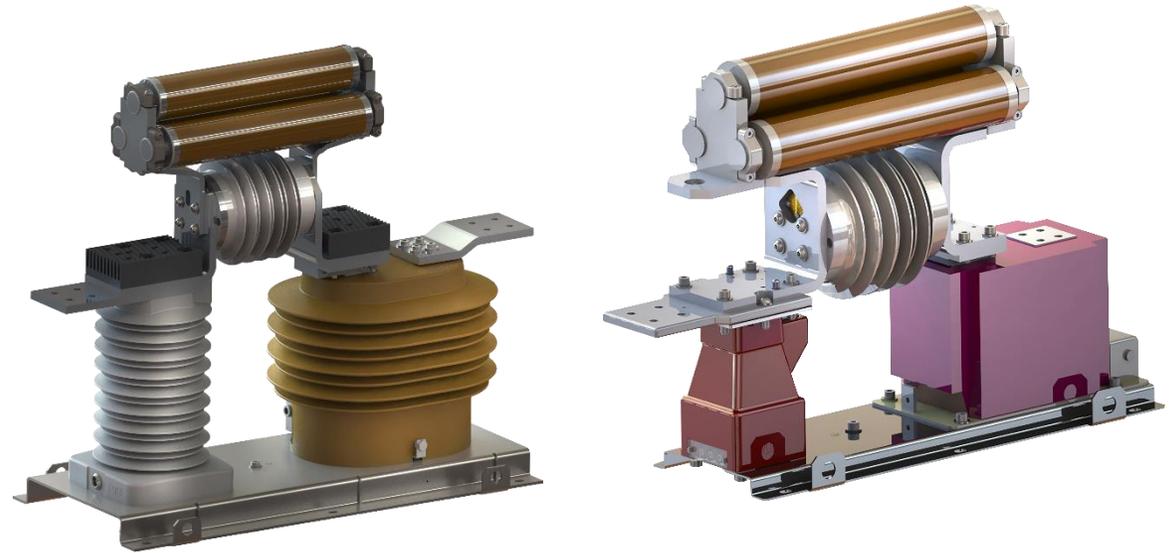
Compact design consisting of insert and insert holder with impulse transformer and current transformer

Technology available for **indoor and outdoor** conditions

Plug and play insert replacement and **eco-efficient** refurbishment of reusable inserts

Short lead and response times due to standardized engineering process

Fast and easy implementation and **standardized interfaces**



FC-Protector®

New control unit QR6-B

Compact and type tested control unit QR6-B

Reliable fault current detection through continuously monitoring of instantaneous current

Self-monitoring through **integrated fault detection**

Analogue technology to **support speed and reliability** requirements

Well structured HMI using colored display elements for indicating extended information



FC-Protector®

New control system

IP55 control system cabinet

- IP55 cabinet
- Outdoor suitability for harsh environments
- Low footprint

IP4X control system cabinet

- HMI front visibility
- Easy access and well structured
- Low footprint

Low Voltage Compartment

- Flexible integration into non-standard Low Voltage Compartment



IP55 control system cabinet

QR6-B integrated in outdoor cabinet

FC-Protector®

Wide range of applications

Industry



Oil and gas
Pulp and paper
Cement
Chemical
Iron and steel
Manufacturing

Utility



Power distribution
Power transmission
Power generation
Cogeneration connection

“Green Energy“



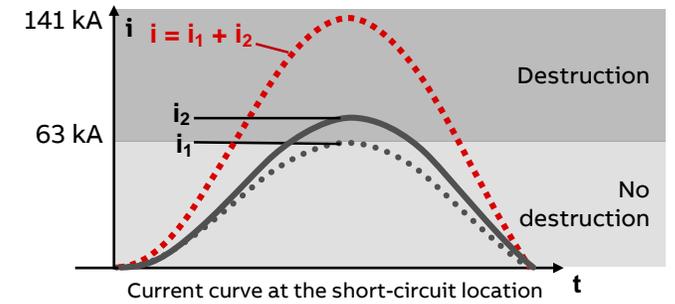
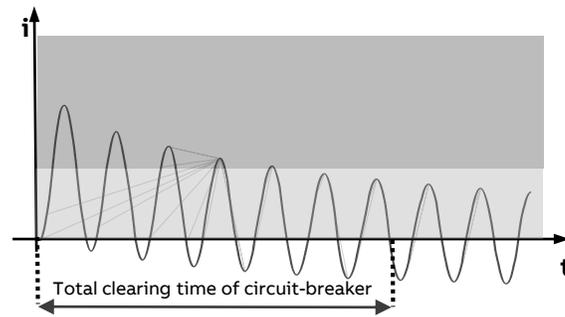
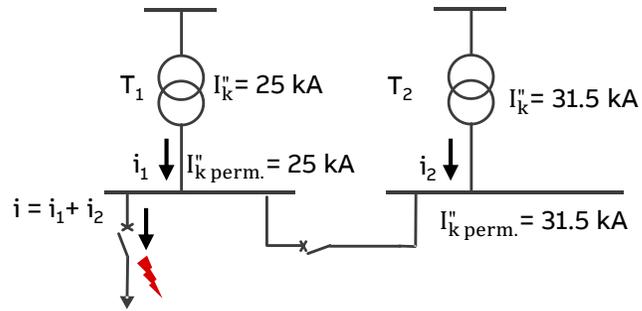
Hydro power
Biomass
Combined heat and power production
Wind power plant (onshore)
Waste Heat Recovery
Waste Treatment

More than 50 years of experience with fault current limitation technology

FC-Protector[®]

...as a short-circuit solution

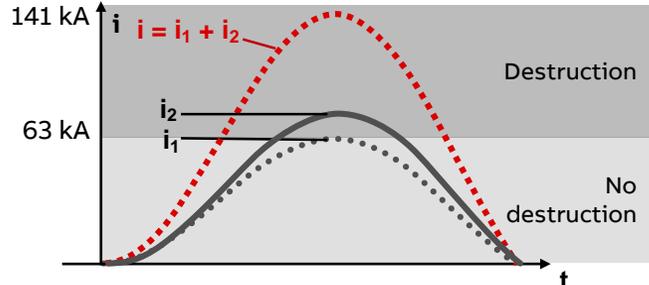
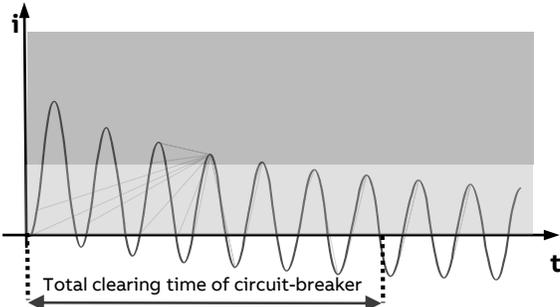
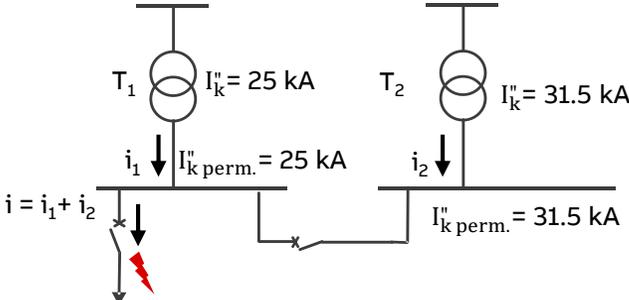
Without FC-Protector



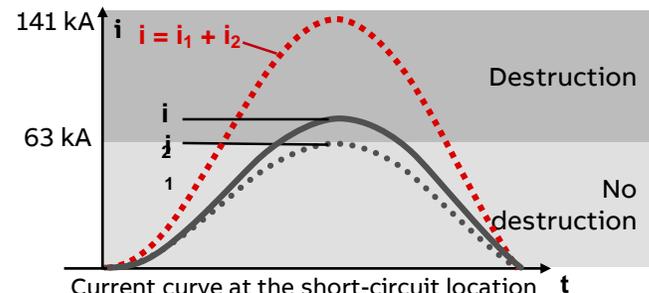
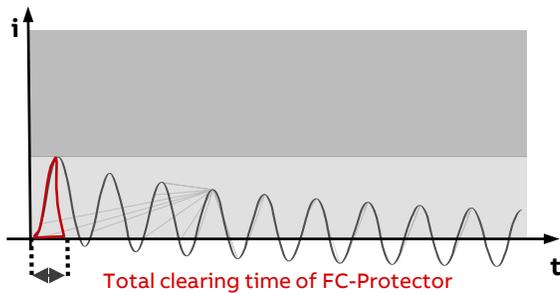
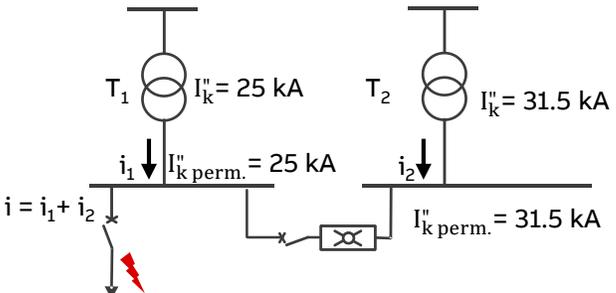
FC-Protector[®]

...as a short-circuit solution

Without FC-Protector

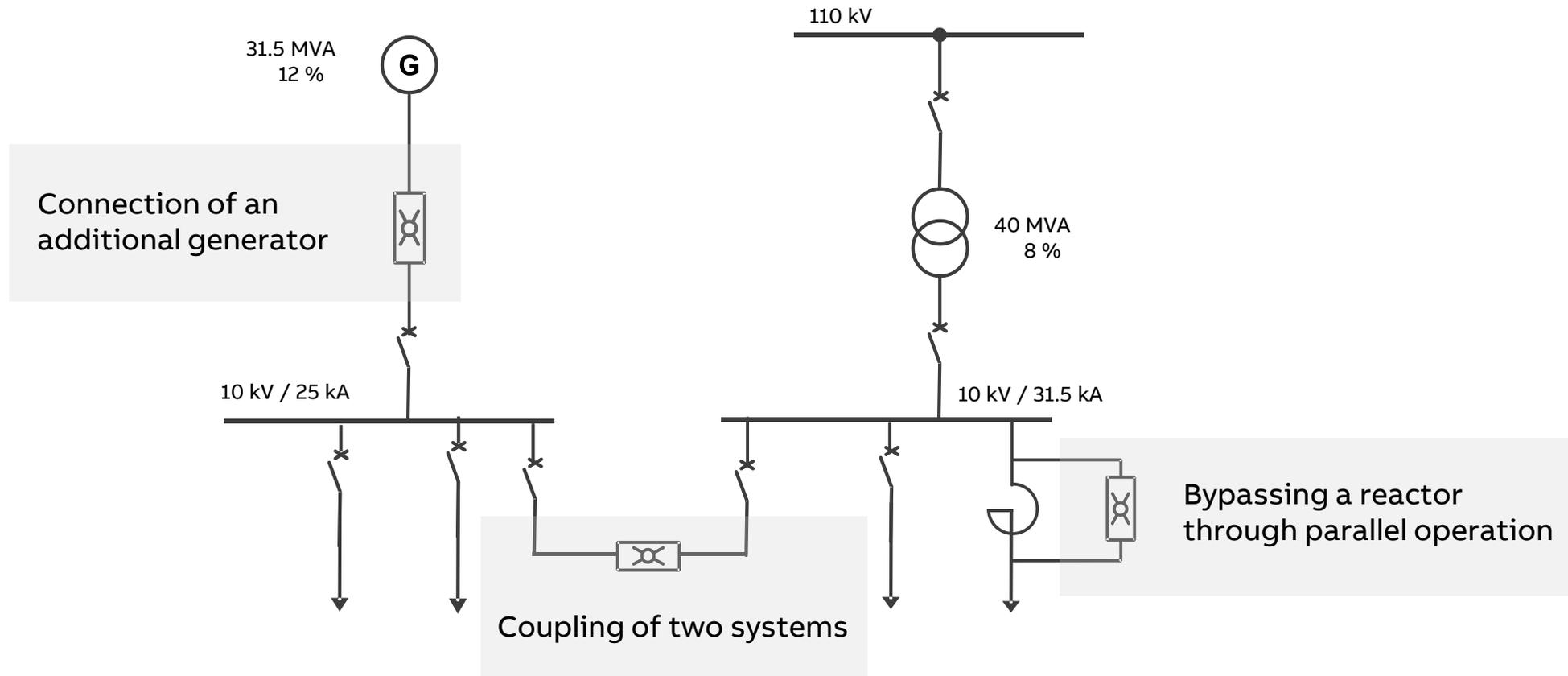


With FC-Protector



FC-Protector[®]

Applications



FC-Protector[®]

Technical data

	FC-Protector		
Rated voltage U_r	7.2 kV	12 kV	17.5 kV
Rated current I_r	... 2500 A		
Rated short-circuit current I_k	... 63 kA		
Application	Indoor (IP4X) Outdoor (IP 55)		

Remark: Higher values possible with I_s -limiter[™].

FC-Protector®

Unbeatable advantages

Fast implementation

Project related **basic engineering** according to customer's requirements

Quick response time based on standardized engineering and documentation

Short delivery time based on standard components

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Standard solution

Standardized and compact design for all applications

Fully **type tested** according to latest standards

Flexible indoor and outdoor suitability

Weather and seismic proofed solution

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Equipment and process protection

Safe protection of electrical installations and equipment, processes and systems, auxiliary supply in power plants by immediate separation from the fault affected network

Leading to...

Minimization of damage by reducing short-circuit current energy and respectively limiting stress on network components

Improved „power quality“ by reducing voltage dip

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Improved „power quality“ by reducing voltage dip

Cost- and eco-efficient solution

Protection of customer's investment

System extension without replacing existing electrical equipment such as circuit-breaker, busbar or cable system

Cost- and eco-efficient due to minimization of electrical losses

Cost-efficient due to maximized uptime

Downsizing of the system by using lower rated equipment

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Summary

ABB's solution for standard applications

Solves short-circuit current problems in electrical networks before peak short-circuit current is reached

High mounting flexibility for wide range of indoor and outdoor applications

Reduced lead time due to standardized components and engineering process

How we can support you?



FC-Protector®

New solution for standard applications

Please visit our website for the latest product information

<http://new.abb.com/medium-voltage/apparatus/fault-current-limiting/fc-protector>

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