



ABB AG – Calor Emag Medium Voltage Products

# Gas-insulated switchgear Type ZX2

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Medium voltage switchgear  
type ZX2  
Single or double busbar systems

12 kV, ...2500 A, ...40 kA

24 kV, ...2500 A, ...40 kA

36 kV, ...2500 A, ...40 kA

# Gas-insulated switchgear Type ZX2

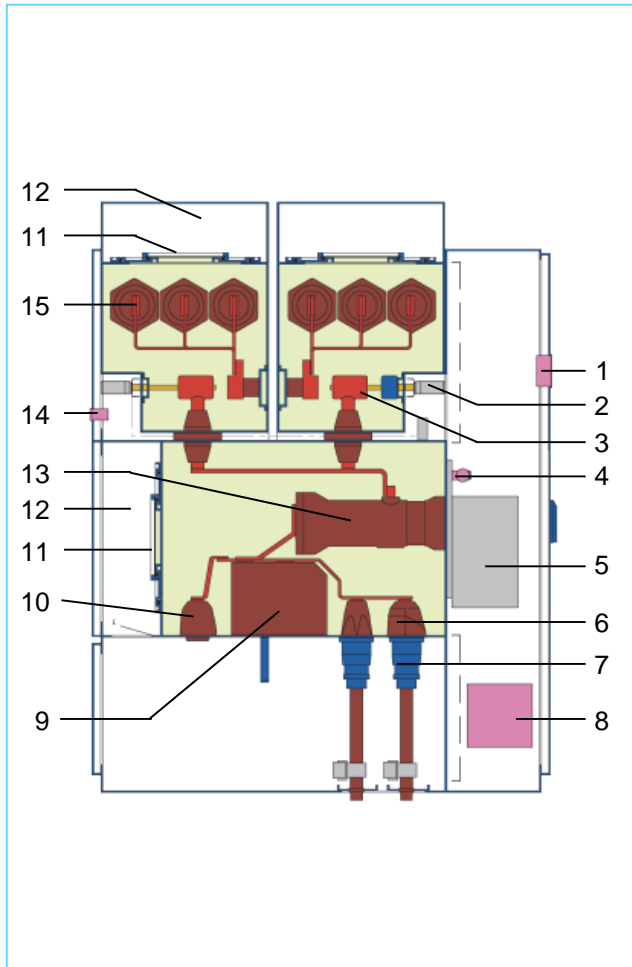
With IAC  
classification  
AFLR 40 kA 1s



Rated voltage	kV	12	24	36 <sup>1)</sup>
Rated current of busbars	A	...2500	...2500	...2500
Rated current of tee-offs	A	...2500	...2500	...2500
Rated short-circuit breaking current	kA	...40	...40 <sup>2)</sup>	...40 <sup>2)</sup>
Insulating gas		SF <sub>6</sub> <sup>3)</sup>	SF <sub>6</sub> <sup>3)</sup>	SF <sub>6</sub> <sup>3)</sup>
Width <b>a</b>	mm	600 / 800 <sup>4) 5)</sup>		600 / 800 <sup>4)</sup>
Height <b>b</b>	mm	2300		
Depth <b>c</b>	mm	1860 ( with 500mm deep LV compartment)		

- 1) Higher values as per international standards on request
- 2) 600 mm panel width up to 31,5 kA rated short-circuit breaking current
- 3) Insulating gas: sulphur hexafluoride (SF<sub>6</sub>)
- 4) Rated feeder current above 1250 A
- 5) Double feeder panel up to 25 kA, 2 x 630 A

# Gas-insulated switchgear Type ZX2



## Double busbar panel for 1250 A

- 1 HMI of multifunctional protection and control unit
- 2 Three position disconnect operating mechanism
- 3 Three position disconnect
- 4 Pressure sensor (temperature-compensated)
- 5 Circuit-breaker operating mechanism
- 6 Cable socket
- 7 Cable plug
- 8 Electronic unit of multifunctional protection and control unit
- 9 Block sensor or transformer
- 10 Testsocket
- 11 Pressure relief disc
- 12 Pressure relief duct
- 13 Circuit-breaker
- 14 Measuring sockets for capacitive voltage indicator system
- 15 Busbars
- SF<sub>6</sub>

# Gas-insulated switchgear Type ZX2

Operation of a  
switchgear panel  
without multi-  
functional protection-  
and control-unit

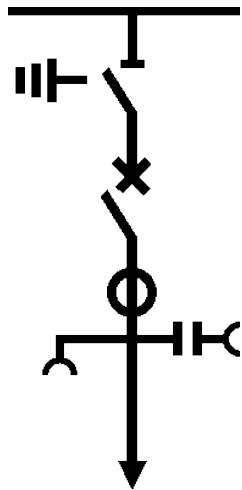


## Bay Control Unit

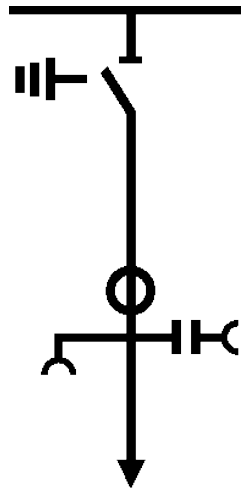
- Modern solution of a conventional switchgear control in ZX
- Integral control, indication and annunciation unit
- Conventional control without active components
- Control via conventional push- buttons and key operated local / remote switch

# Gas-insulated switchgear Type ZX2

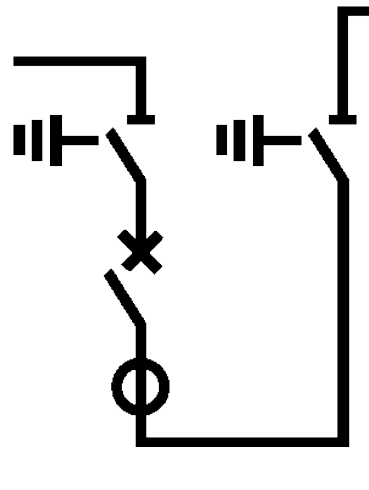
Single lines of switchgear variants (SBB)



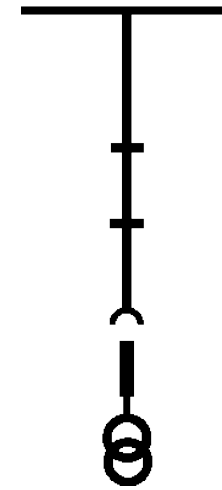
Feeder panel



Cable  
connection



Bus sectionalizer  
in one panel

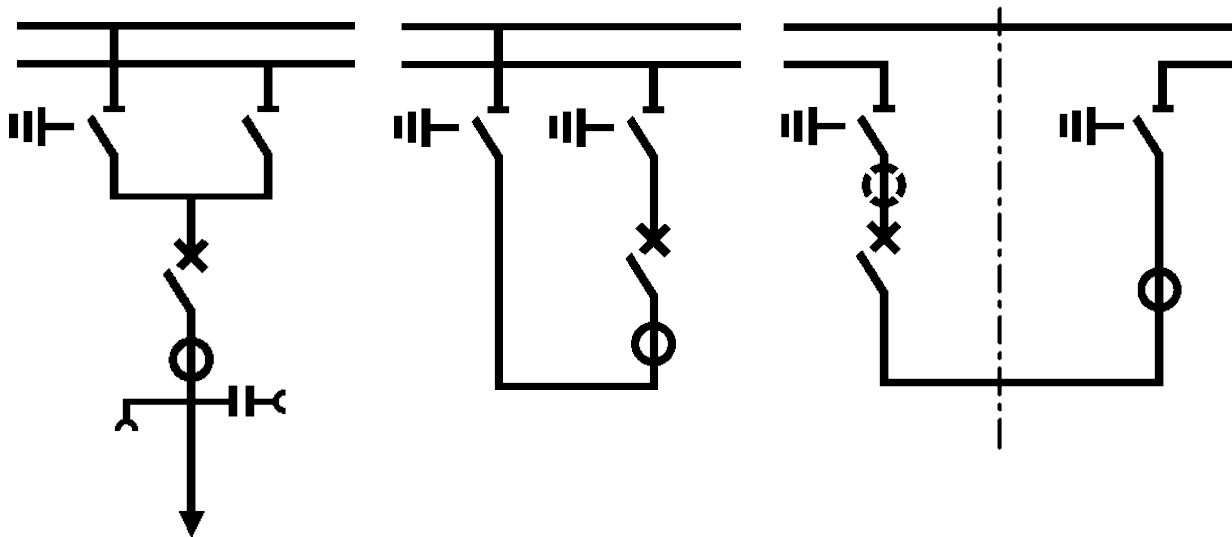


BB-metering

# Gas-insulated switchgear Type ZX2

Sheet 1 / 2

Single lines of switchgear variants (DBB)



Feeder panel

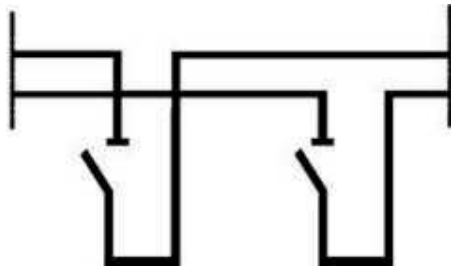
Bus coupler

Bus sectionalizer

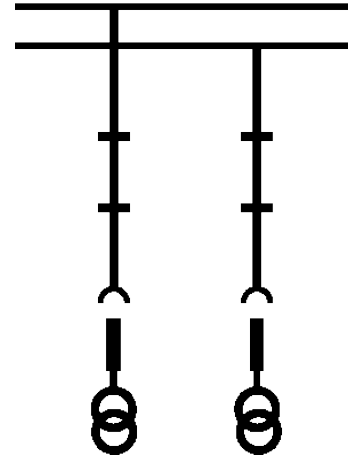
# Gas-insulated switchgear Type ZX2

Sheet 2 / 2

Single lines of switchgear variants (DBB)



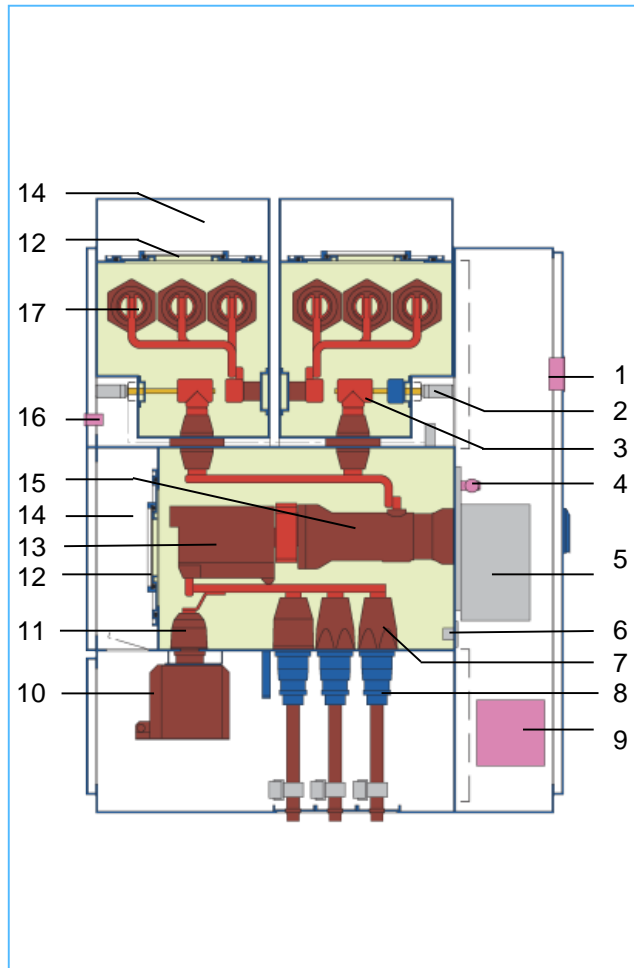
Bus section w/o  
circuit-breaker



BB-metering



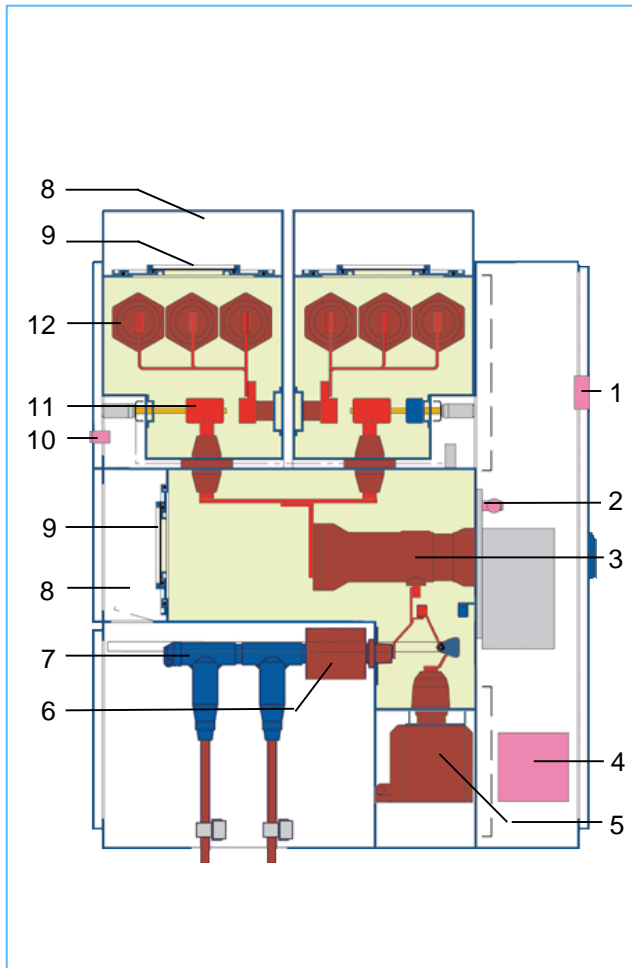
# Gas-insulated switchgear Type ZX2



## Double busbar panel for 2000 A

- 1 HMI of multifunctional protection and control unit
- 2 Three position disconnector operating mechanism
- 3 Three position disconnector
- 4 Pressure sensor (temperature-compensated)
- 5 Circuit-breaker operating mechanism
- 6 Secondary terminals of current transformer
- 7 Cable socket
- 8 Cable plug
- 9 Electronic unit of multifunctional protection and control unit
- 10 Plug-in voltage transformer
- 11 Multifunctional socket
- 12 Pressure relief disk
- 13 Current transformer
- 14 Pressure relief duct
- 15 Circuit-breaker
- 16 Measuring sockets for capacitive voltage indicator system
- 17 Busbars
- SF<sub>6</sub>

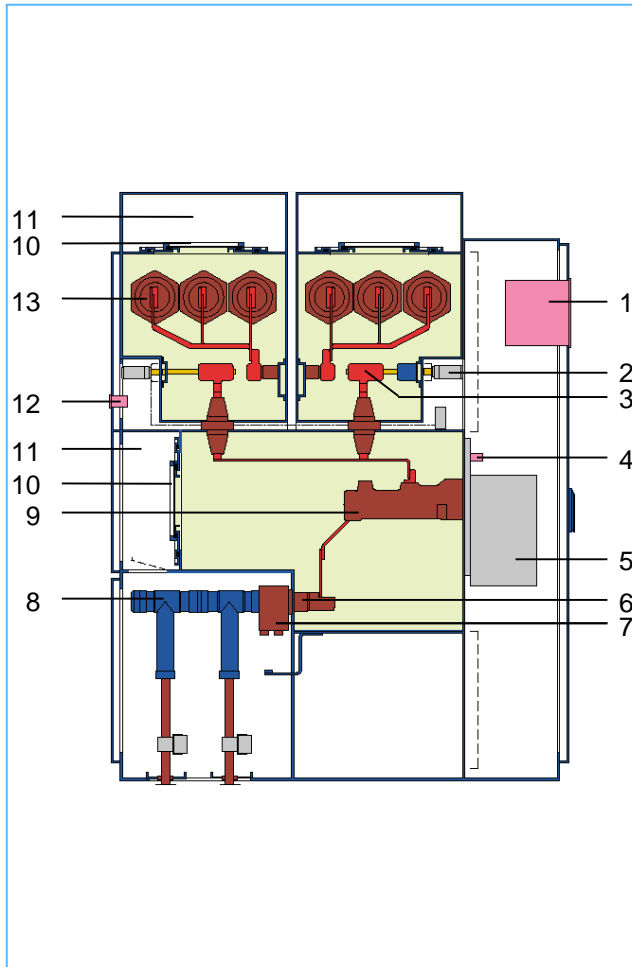
# Gas-insulated switchgear Type ZX2



## Single busbar panel with outer cone connection for up to 1250A

- 1 HMI of multifunctional protection and control unit
  - 2 Pressure sensor (temperature-compensated)
  - 3 Circuit-breaker
  - 4 Electronic unit of multifunctional protection and control unit
  - 5 Plug-in isolatable voltage transformer
  - 6 Ring type current transformer
  - 7 Outer cone cable connector
  - 8 Pressure relief duct
  - 9 Pressure relief disc
  - 10 Measuring sockets for capacitive voltage indicator system
  - 11 Three position disconnecter
  - 12 Busbars
- SF<sub>6</sub>

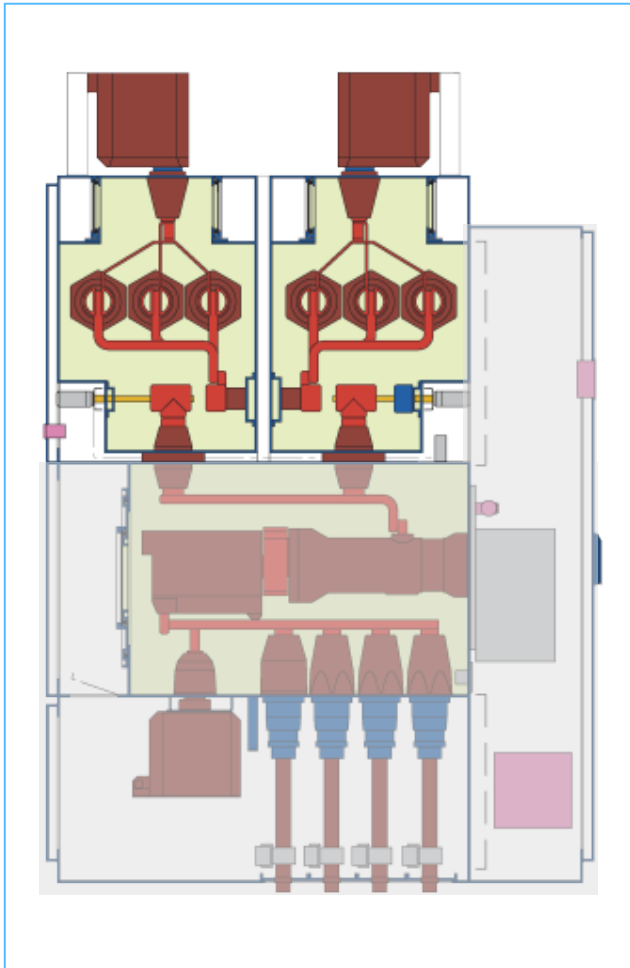
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Double feeder panel up to 24 kV  
630 A for each feeder

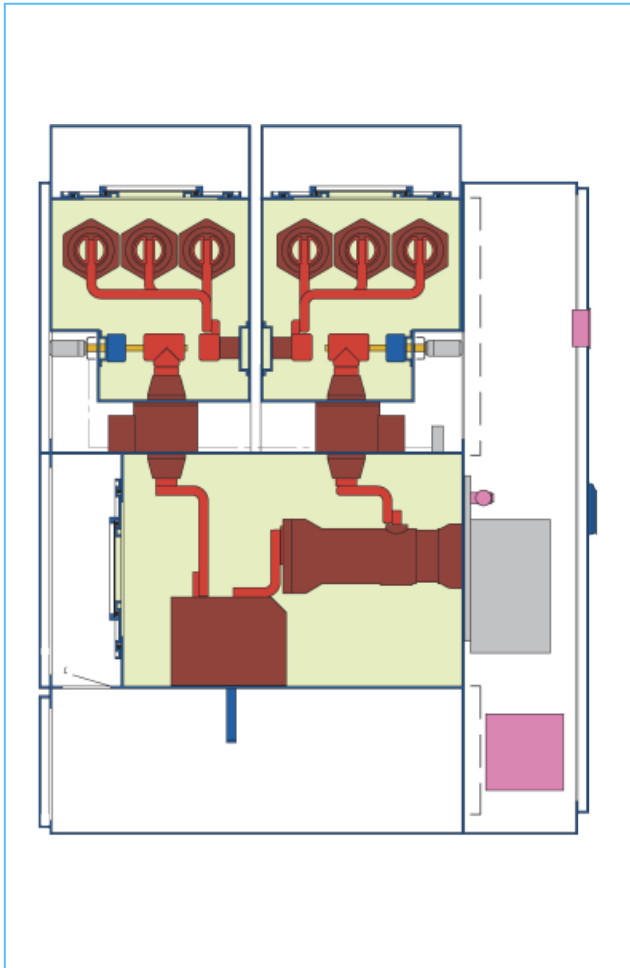
- 1 Multifunctional protection and control unit
  - 2 Three position disconnector operating mechanism
  - 3 Three position disconnector
  - 4 Pressure sensor (temperature-compensated)
  - 5 Circuit-breaker operating mechanism
  - 6 Outer cone cable bushing
  - 7 Current transformer or Rogowski coil
  - 8 Outer cone cable plug
  - 9 Circuit-breaker
  - 10 Pressure relief disk
  - 11 Pressure relief duct
  - 12 Measuring sockets for capacitive voltage indicator system
  - 13 Busbars
- SF<sub>6</sub>

# Gas-insulated switchgear Type ZX2



Integrated double busbar  
metering with plug-in  
voltage transformer in air  
on top of panels with  
2000A feeder current

# Gas-insulated switchgear Type ZX2



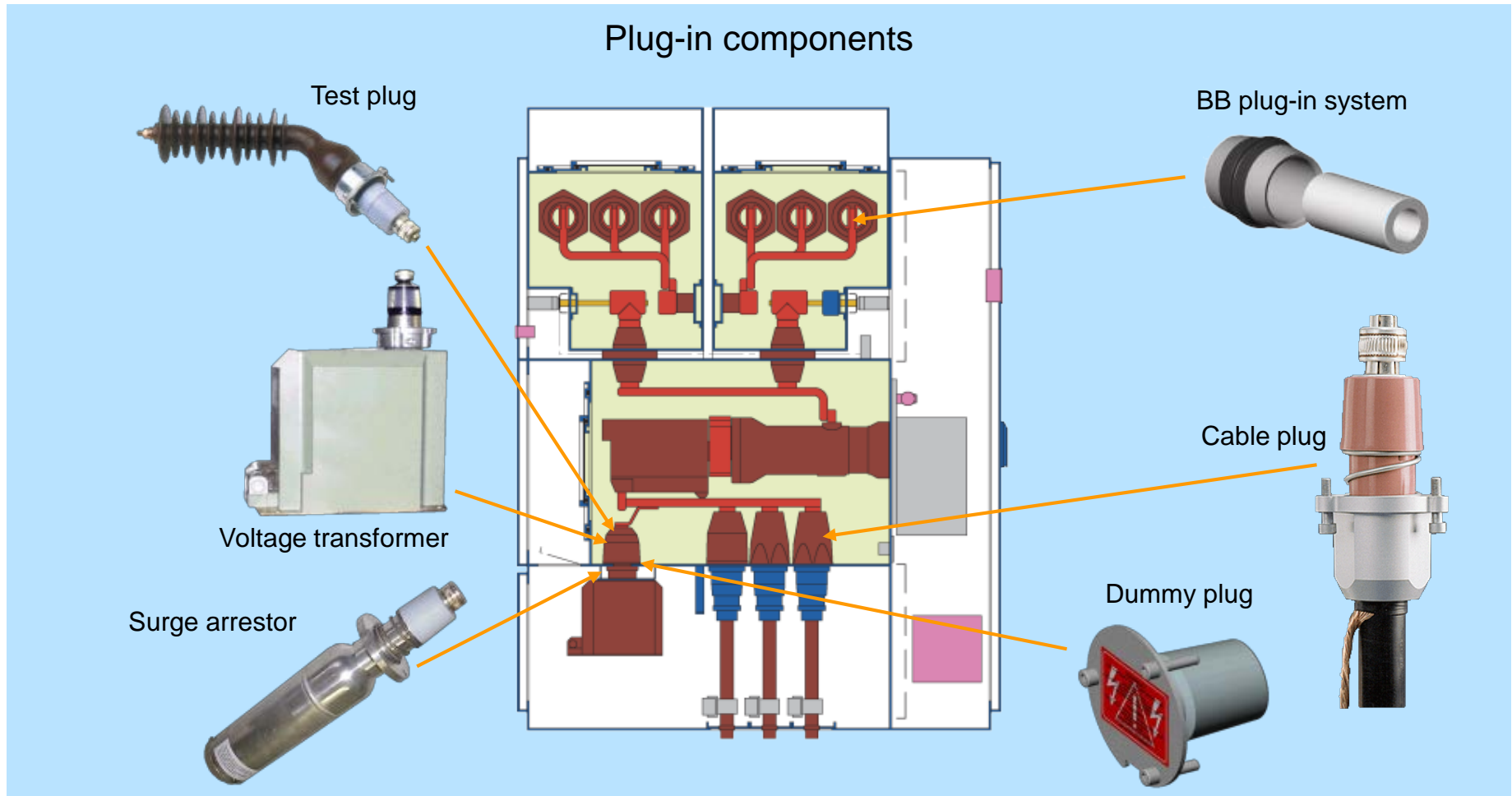
Bus coupler DBB 2000 A

Bus sectionalizer DBB 2000 A

- Optional equipped with current detection by
  - Block device
  - Block device + bushing current transformer
  - Bushing current transformer
  - also without current detection

1250 A panels of width 600 mm are available with block device or without current detection

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### Advantages

- Partitioned function compartments ► maximum safety
- Completely shockproof enclosures
- High voltage section totally independent of environmental influences
- No effect of site altitude on dielectric strength
- Maximum availability for the operator
- Independence of the environment makes for extremely long system life
- Minimum maintenance requirement
- Longer life than other system types

Power and productivity  
for a better world™

