

Customer value presentation

AX1



AX1 Customer values



More intelligent

More reliable

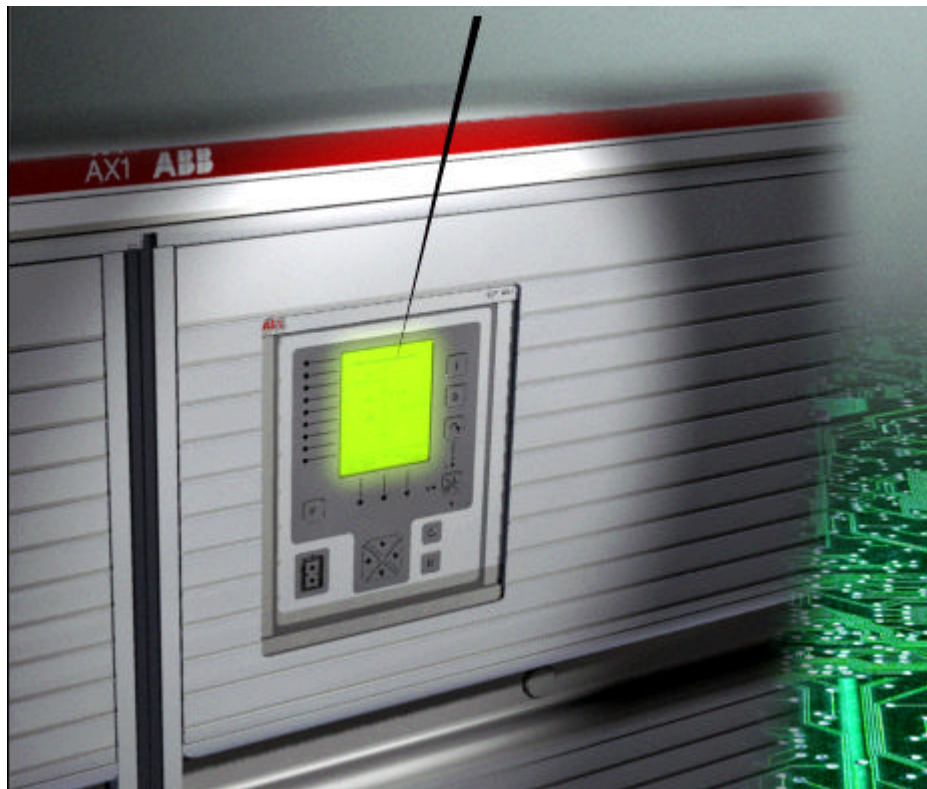
Safer

**Kinder to
environment**

More cost efficient

More Intelligent

*“No I can't close the earth switch now.
The cable is energized.”*



Bay computer REF AX1

Communication

Auxiliary power system

Complete monitoring

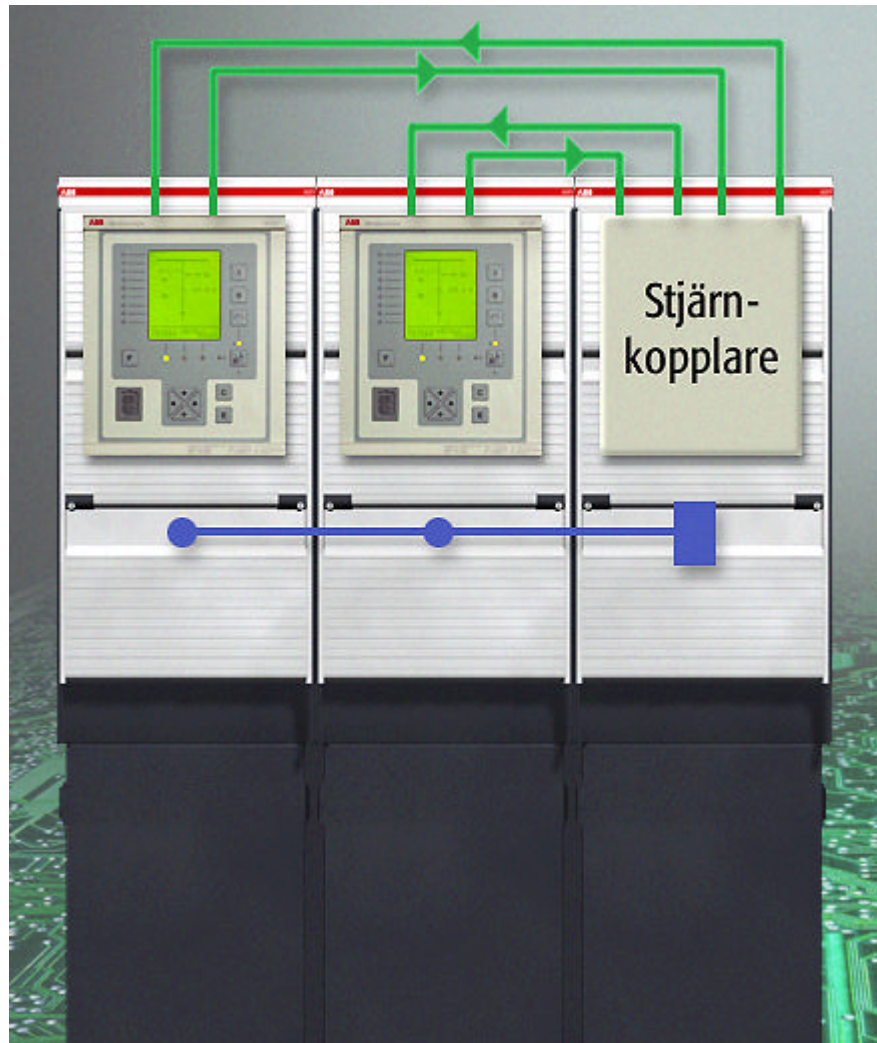
More intelligent



Bay computer REF AX1

- Protection functions
- Alarms
- Measurements
- Condition monitoring
- Operation

More Intelligent

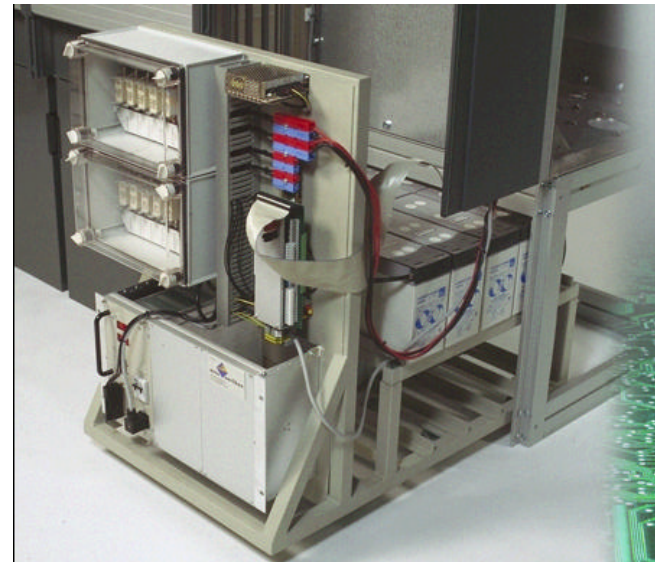


Bus communication

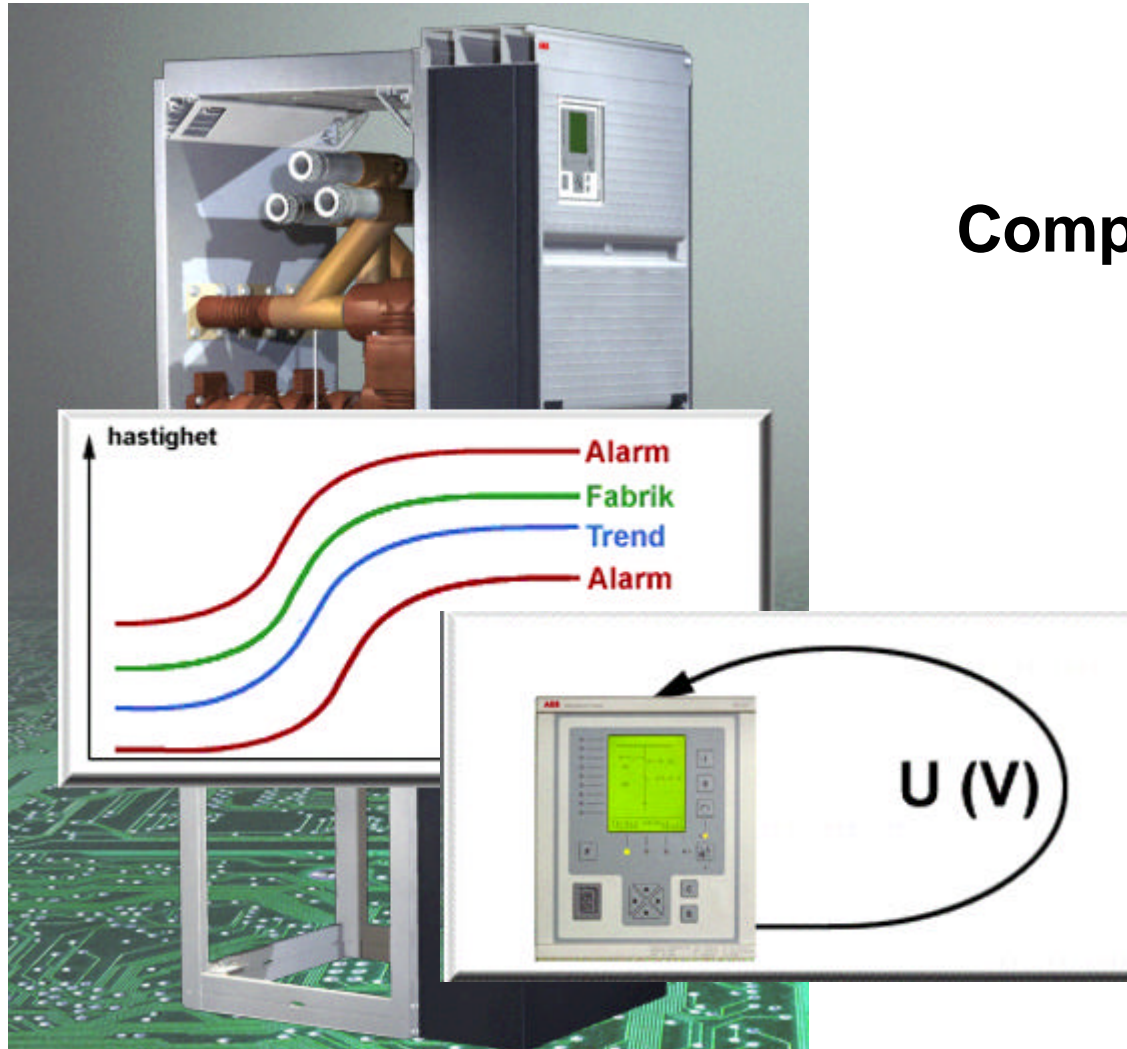
More intelligent



Integrated battery system as option

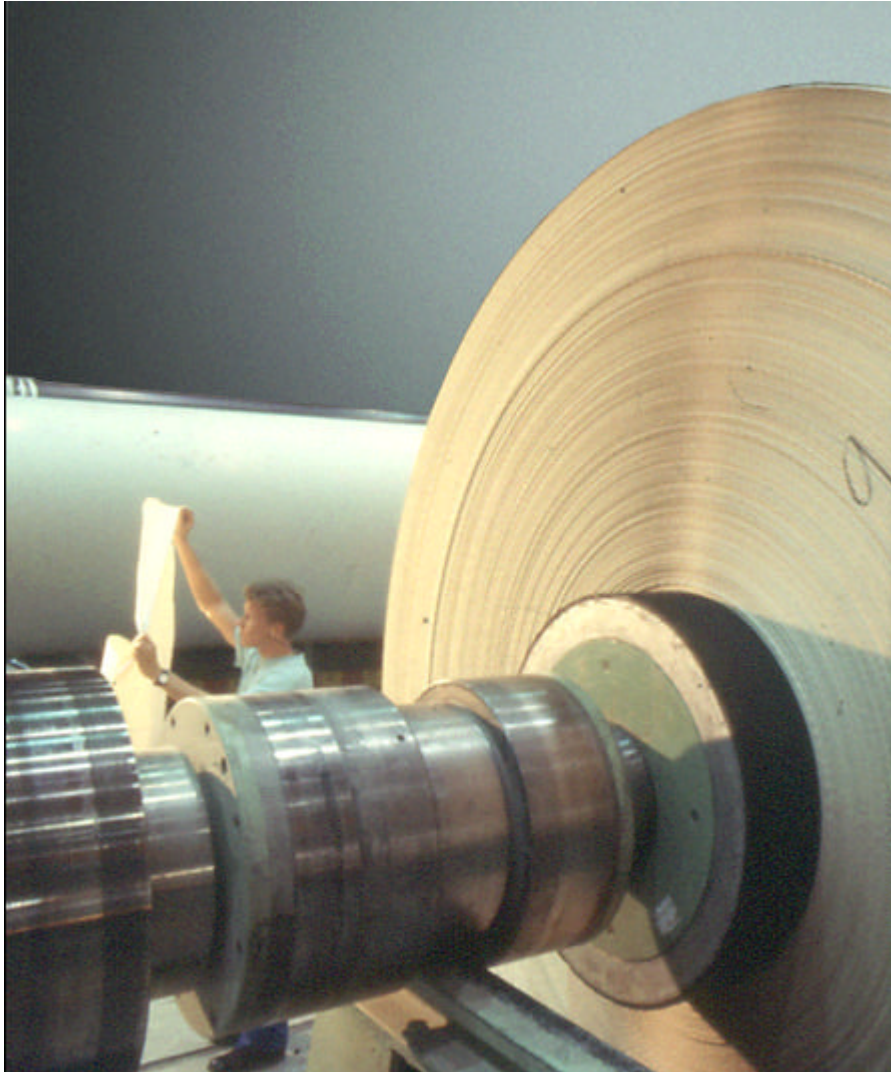


More intelligent



Complete monitoring

More reliable



Main circuit enclosed

Active arc eliminator

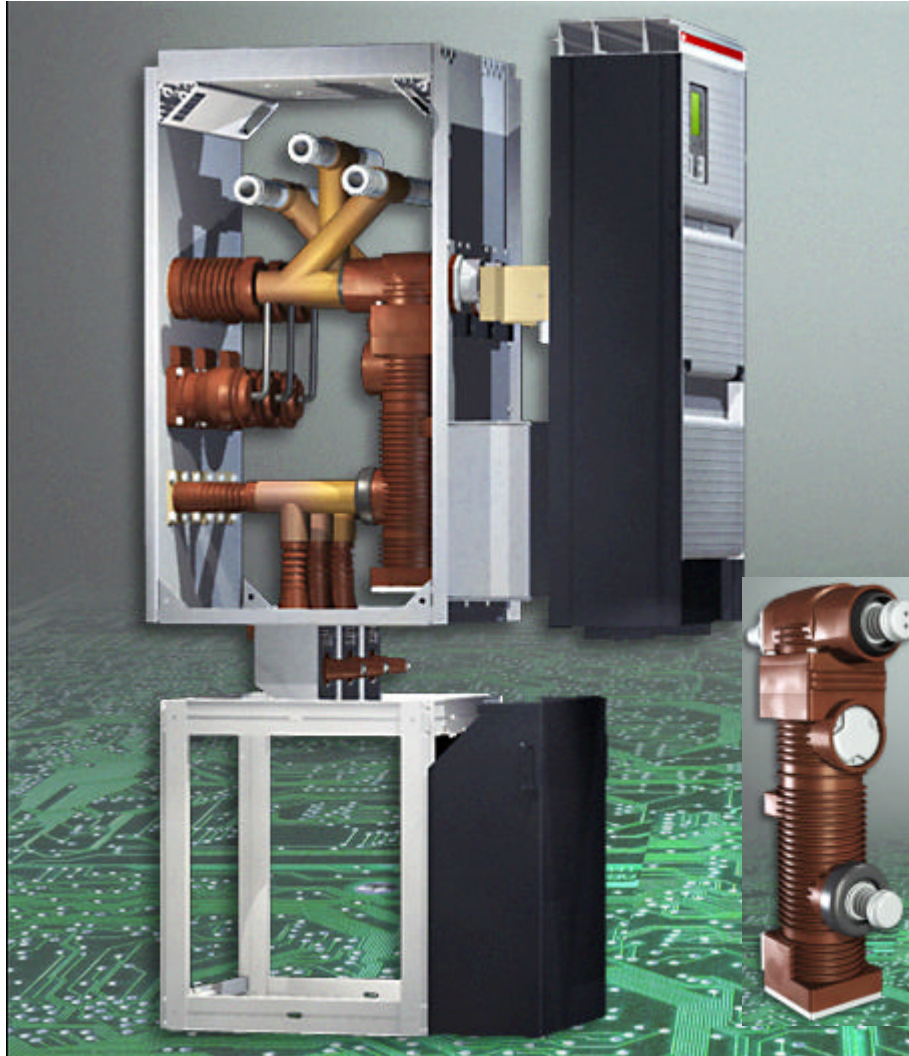
Complete monitoring

Robust

Measuring sensors

Cable connections

More reliable



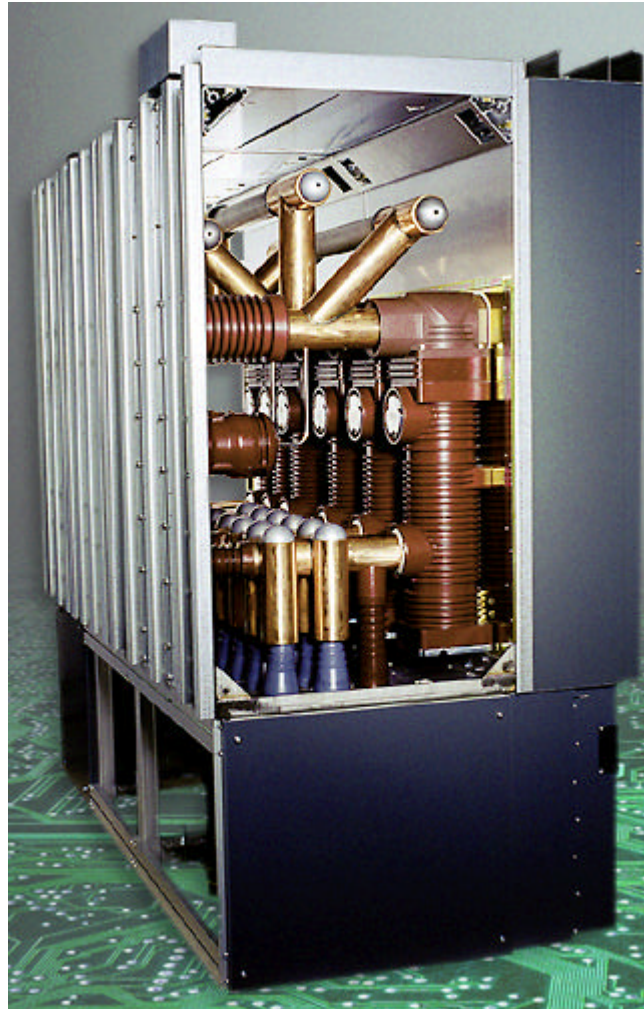
Main circuit enclosed

- **Primary enclosure**
- **Operating enclosure**
- **Lower framework**

IP5x

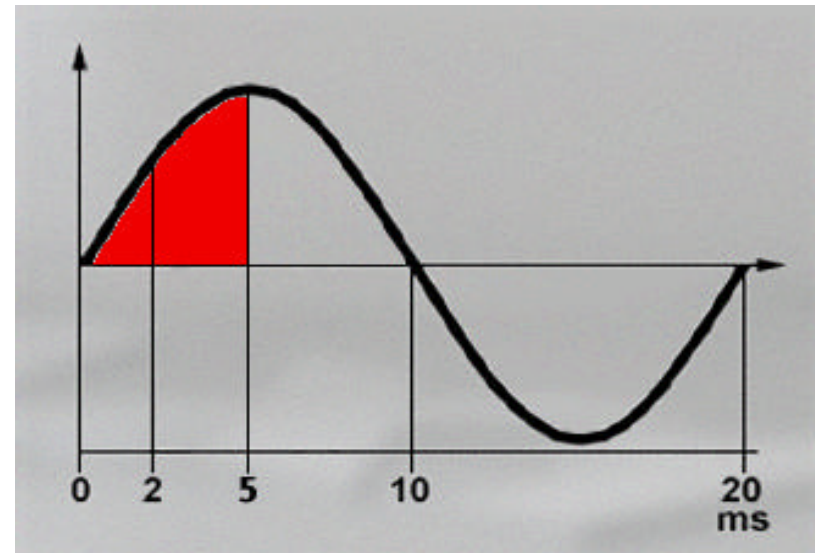
**Gas insulated
switching apparatuses**

More reliable

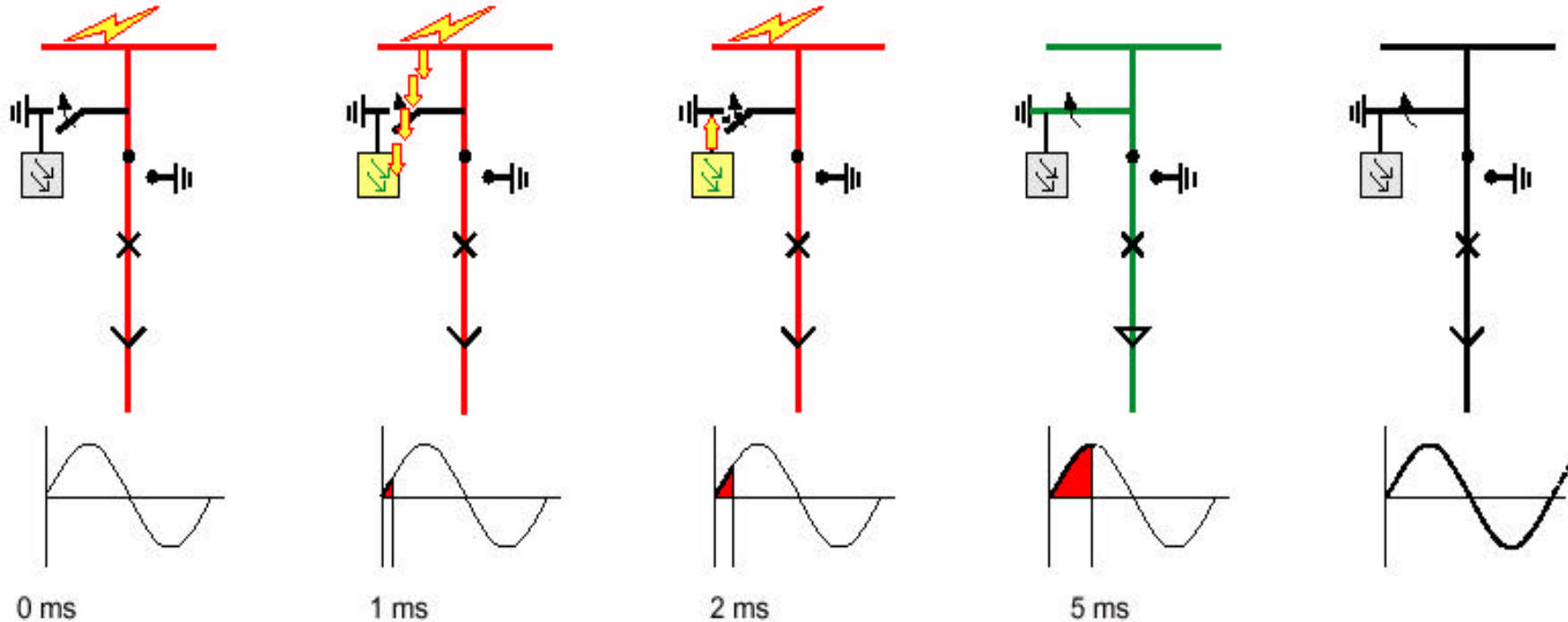


Active arc eliminator

- No mechanical damages
- Eliminates arc within 5 ms



Active arc eliminator



An arc occurs.

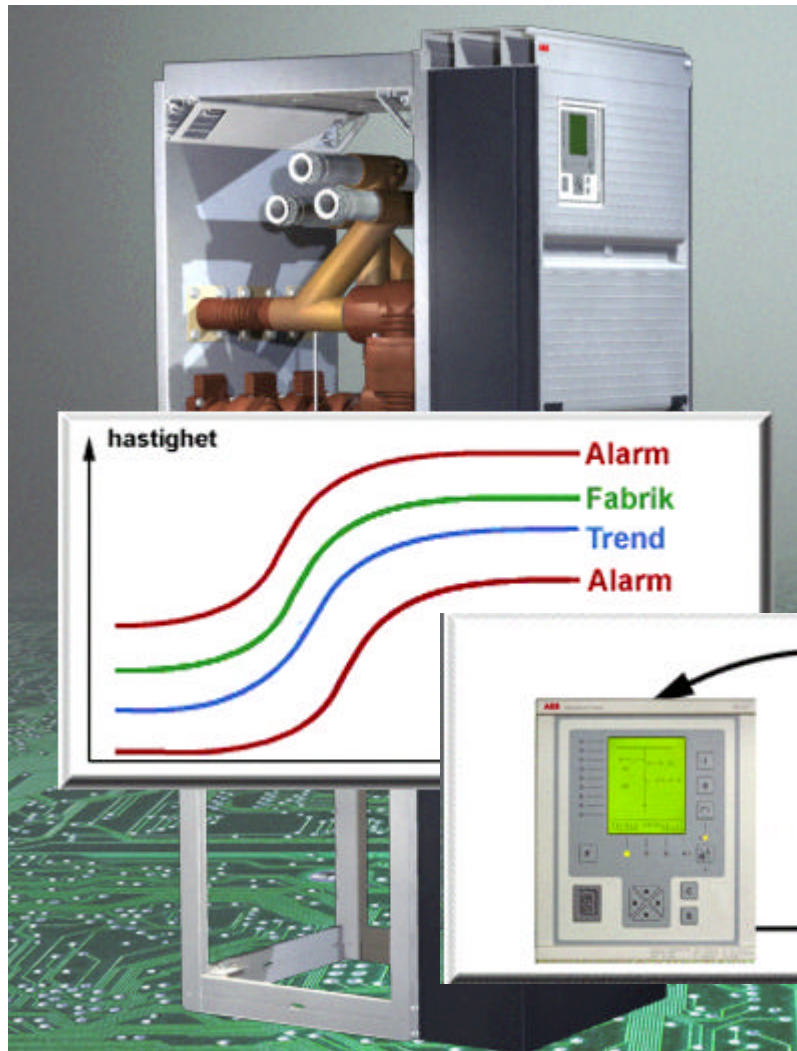
The arc is detected by the Arc monitor.

A trig signal is sent to the Arc eliminator which starts operate.

All phases are closed to earth potential and the arc is eliminated.

The fault current is cleared by the upstream breaker

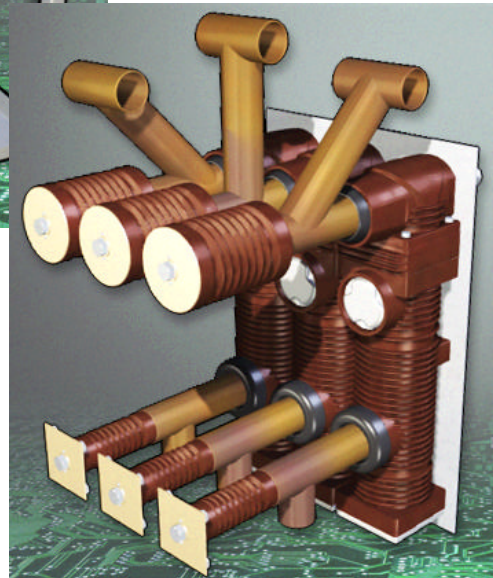
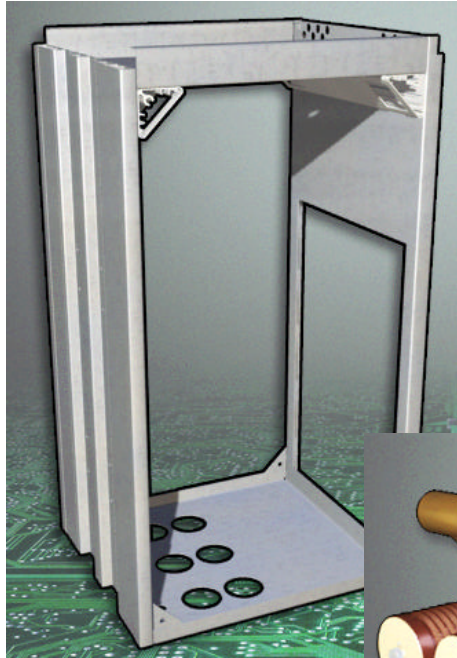
More reliable



Complete monitoring

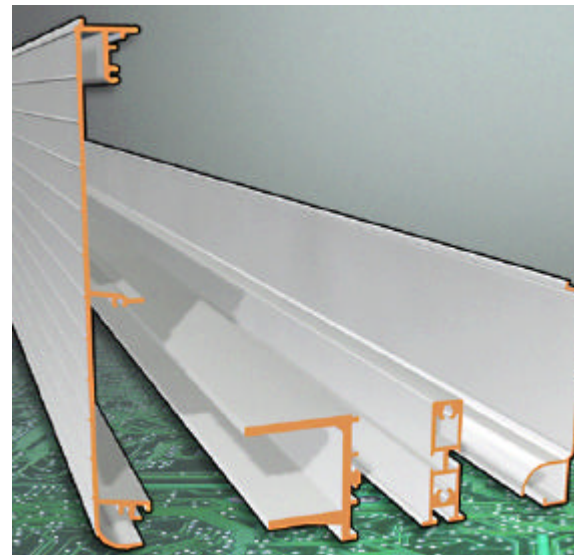
Maintenance on demand

More reliable



Robust

- Primary enclosure
- Tubular busbars
- Spring coil contacts
- Aluminium profiles



More reliable

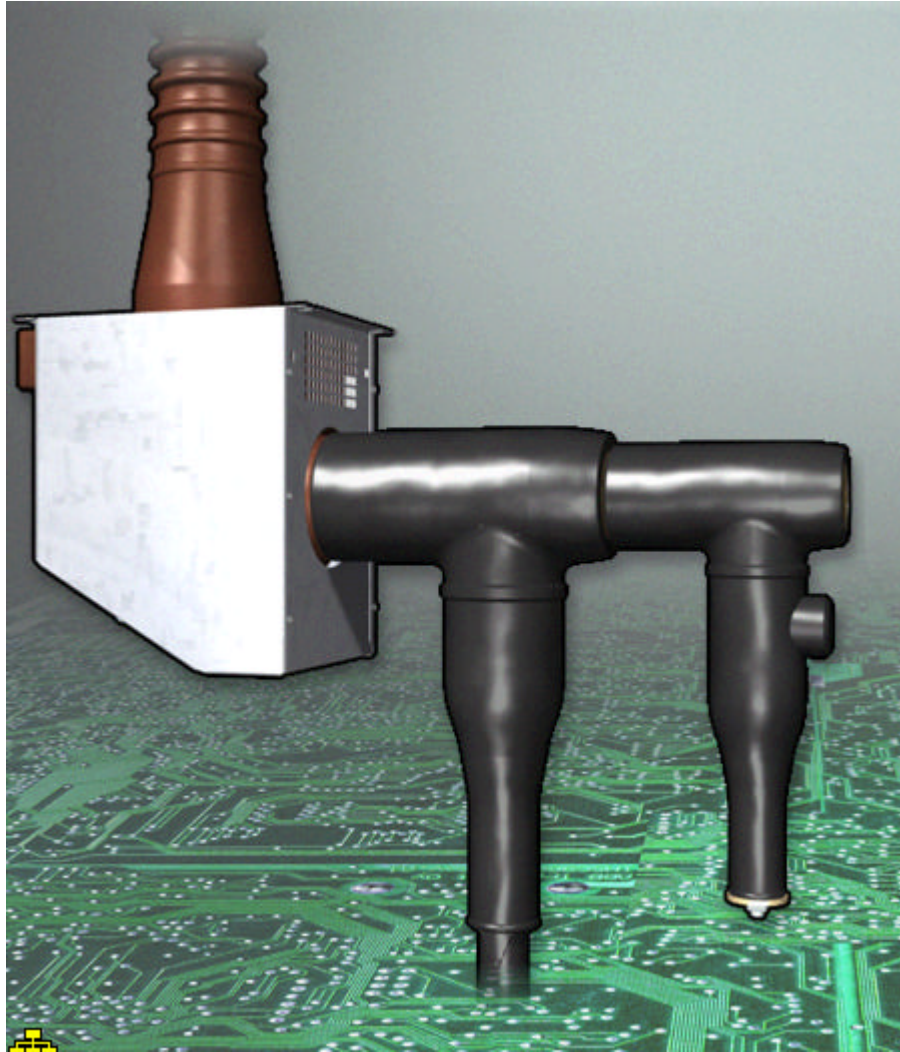


Measurement by sensors

**Current sensor
- Rogovski coil**

**Voltage sensors
- Capacitive & Resistive**

More reliable



Cable connections

- **Single phase encapsulated.**
- **Minimized damage to equipment in case of fault.**

Safer

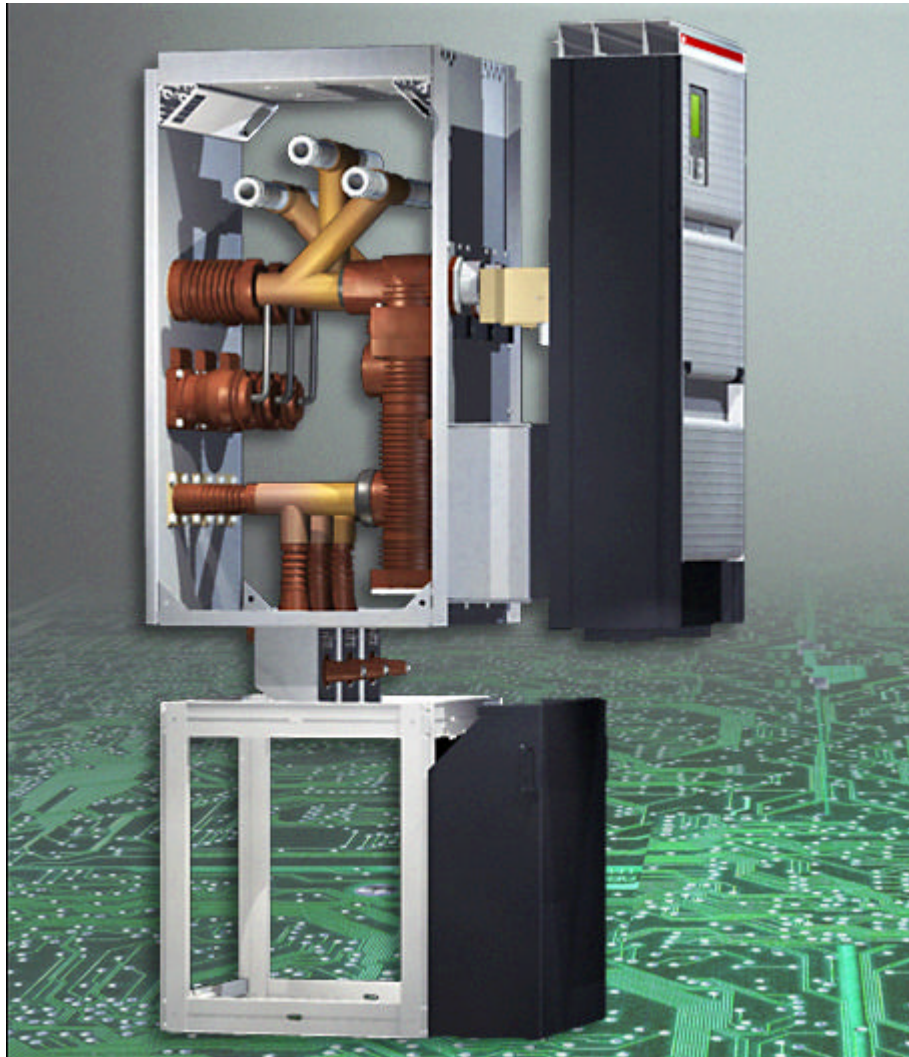


Main circuit enclosed

Active arc eliminator

Safe work environment

Safer



Main circuit enclosed

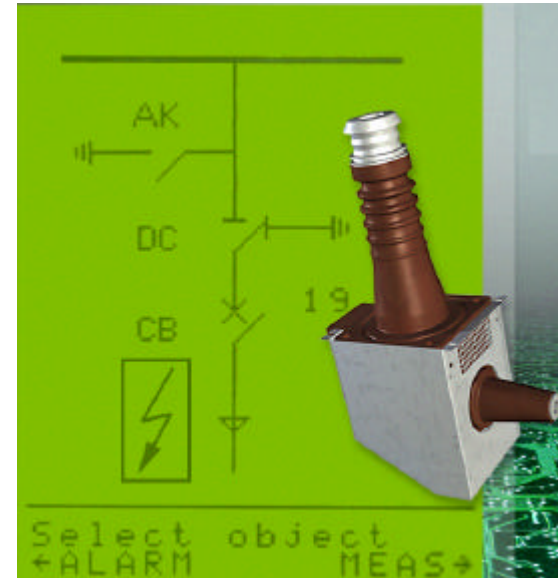
- **Primary enclosure**
- **Operating enclosure**
- **Lower framework**

IP5x

**Gas insulated
switching apparatuses**

Safer

Safe with open door
Touch proof cable connection
Voltage indication



Kind to environment



ISO14001

Environmental labelling

LCA

Kind to environment



ISO14001

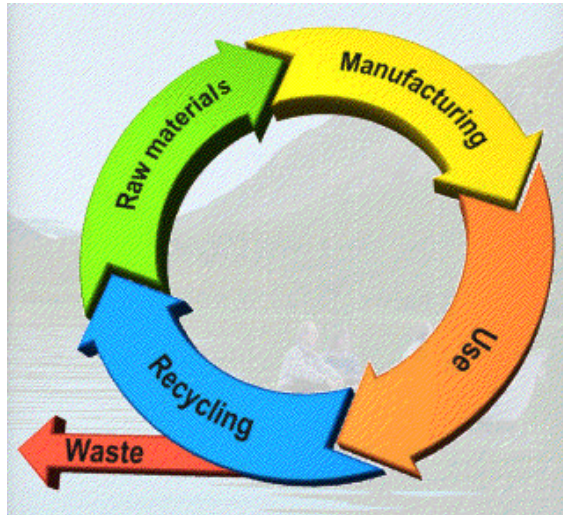
Certified 1998

Kind to environment

Environmental labelling



Kind to environment

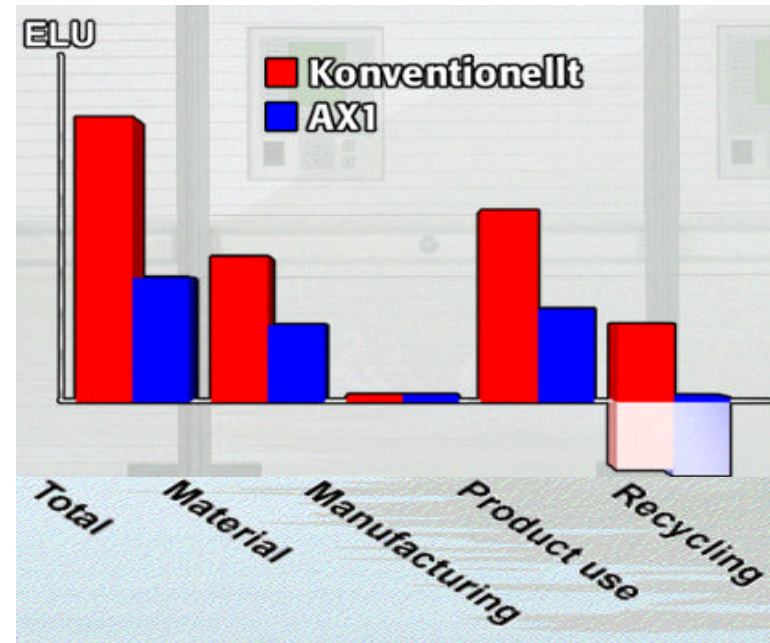


LCA Life cycle assessment

Environmental Load Unit

ex:

Copper manufacturing	27.8 ELU/kg
Copper recycling	-26.4 ELU/kg
Painting	0.00989 ELU/m ²
Pointwelding 1mm	0.000078 ELU/4pcs



More cost efficient



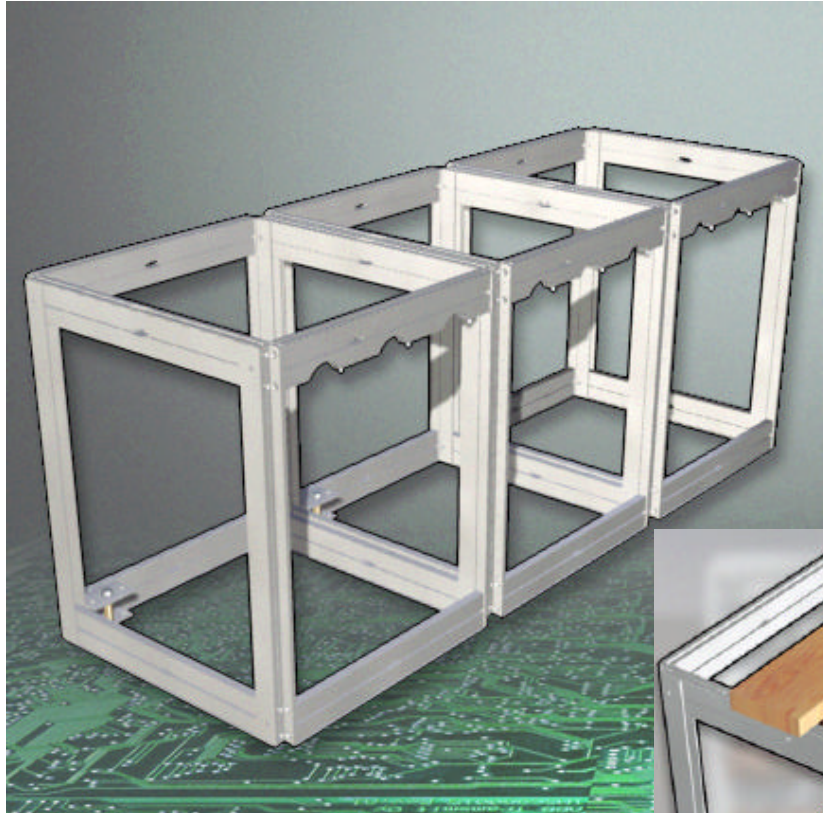
Simple installation

Low building cost

Complete monitoring

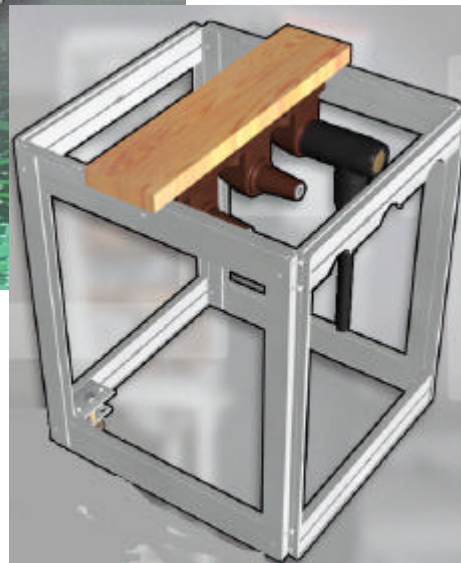
Low LCC

More cost efficient



Simple installation

- **Separate framework**
- **Pre-assembly of cables**



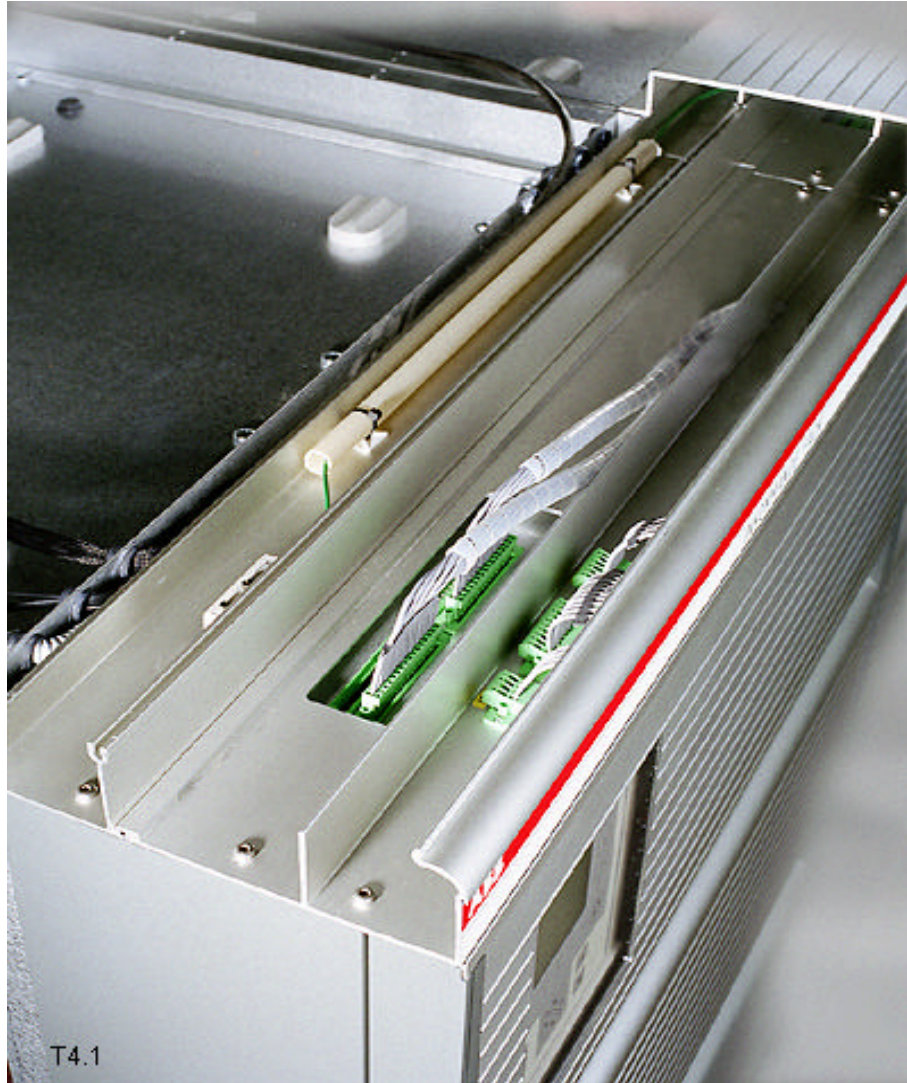
More cost efficient



Simple installation

- Tubular busbars
- Spring coil contacts

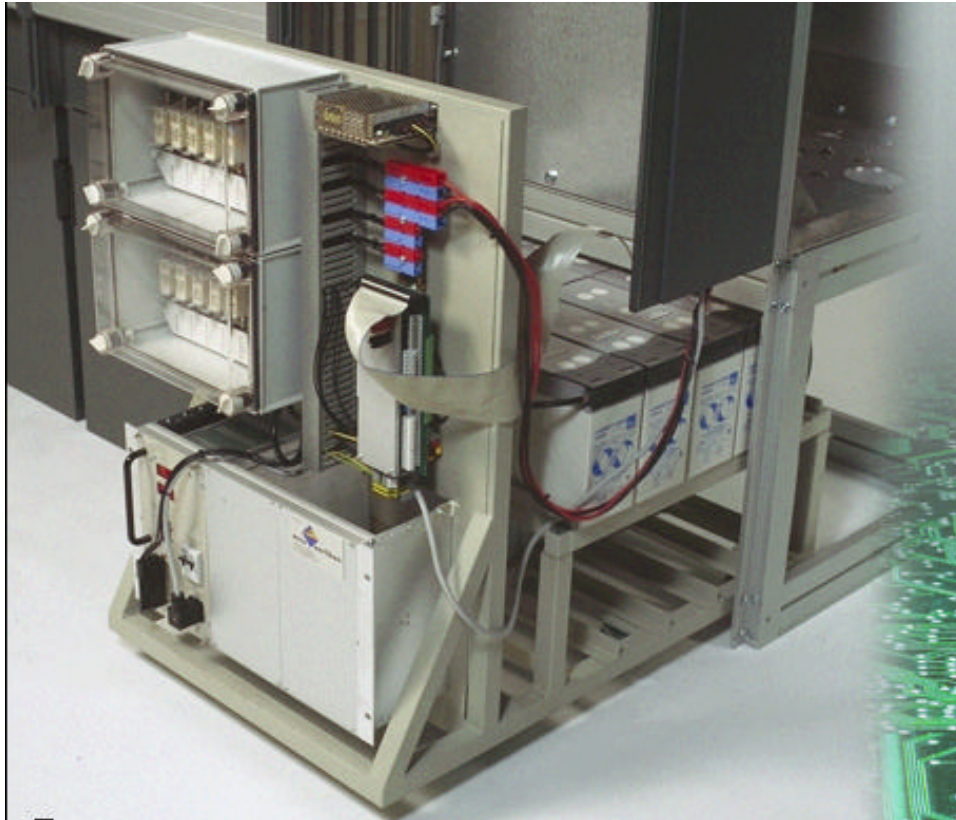
More cost efficient



Simple installation

- Pre-fabricated wiring

More cost efficient



Simple installation

- Integrated battery system as option.

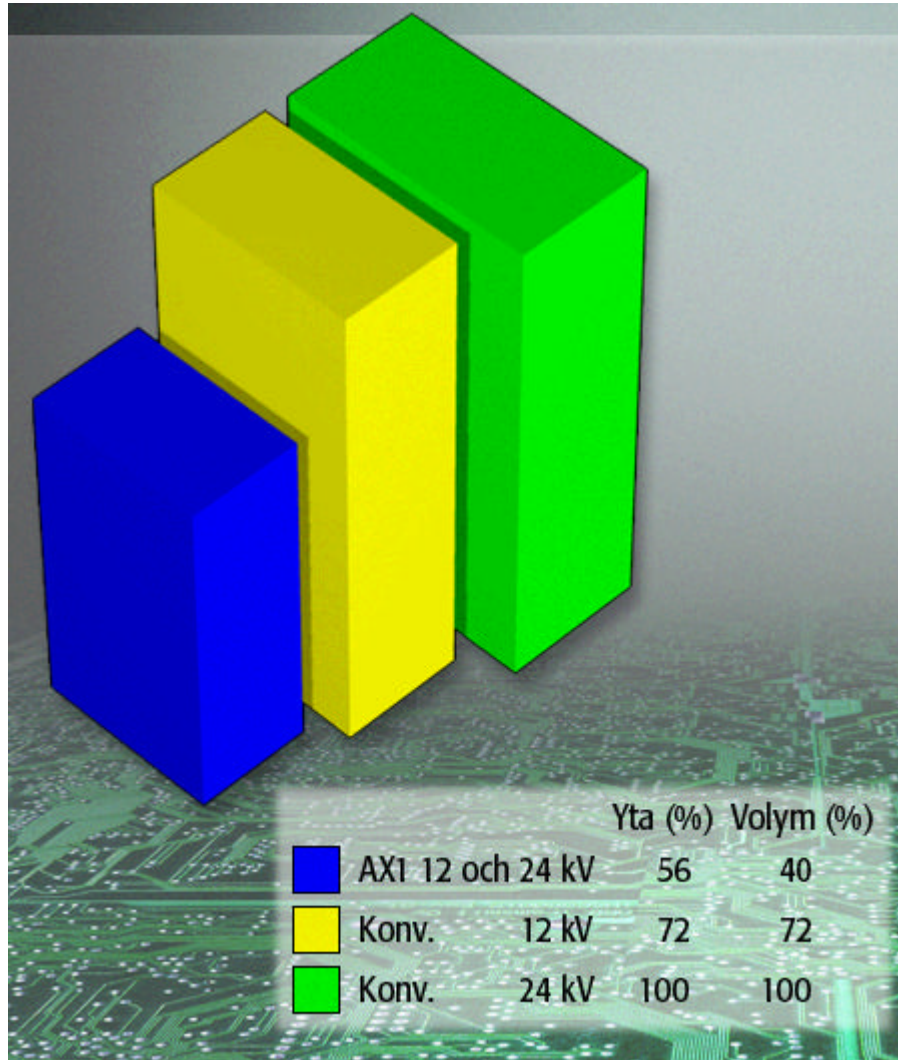
More cost efficient



Simple installation

- Factory tested functions

More cost efficient



Low building cost

- Compact design

More cost efficient



- Low building cost**
- Integrated functions**

More cost efficient



Low building cost

- **No pressure relief**
- **Sliding door**

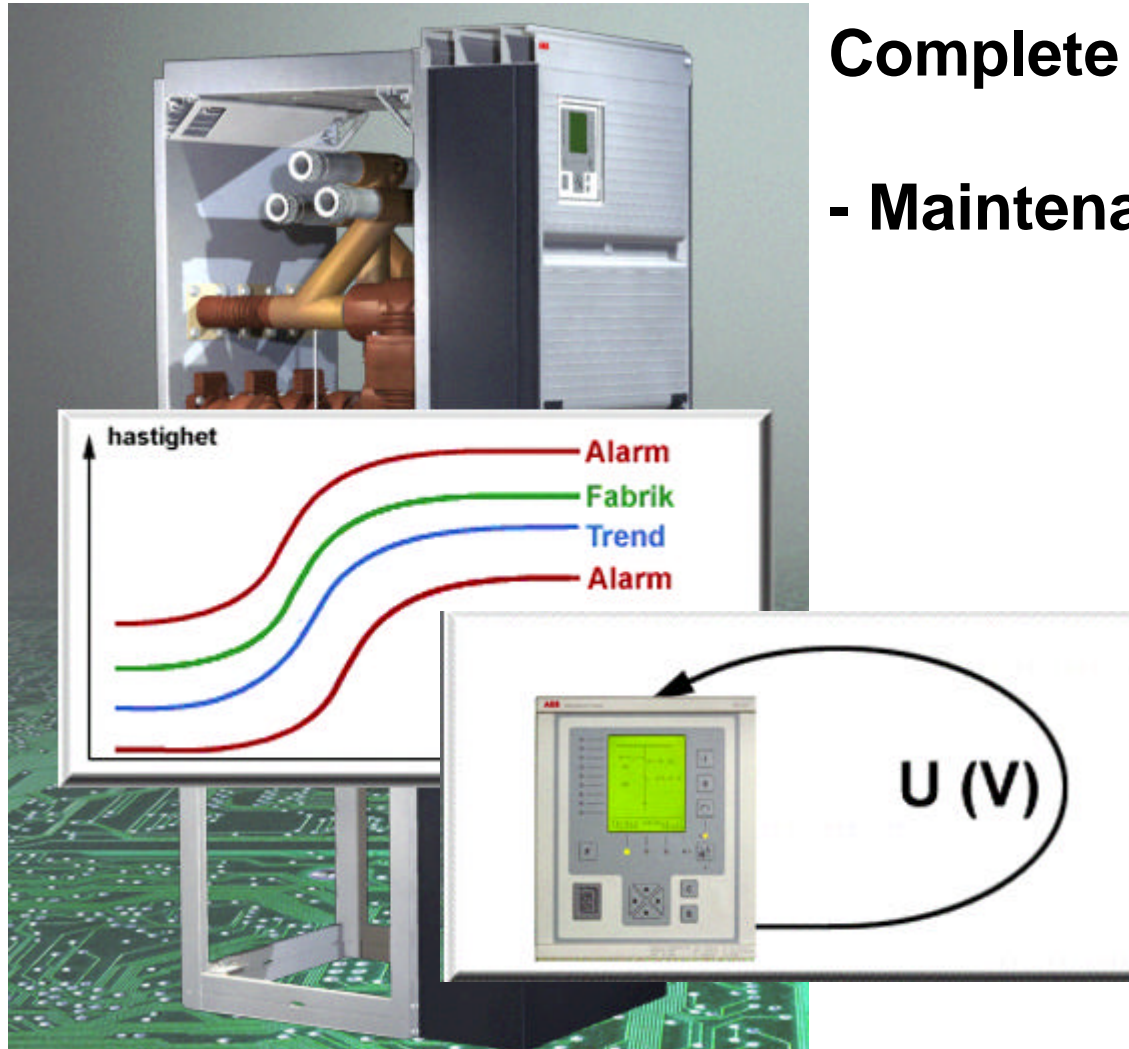
More cost efficient



Low building cost

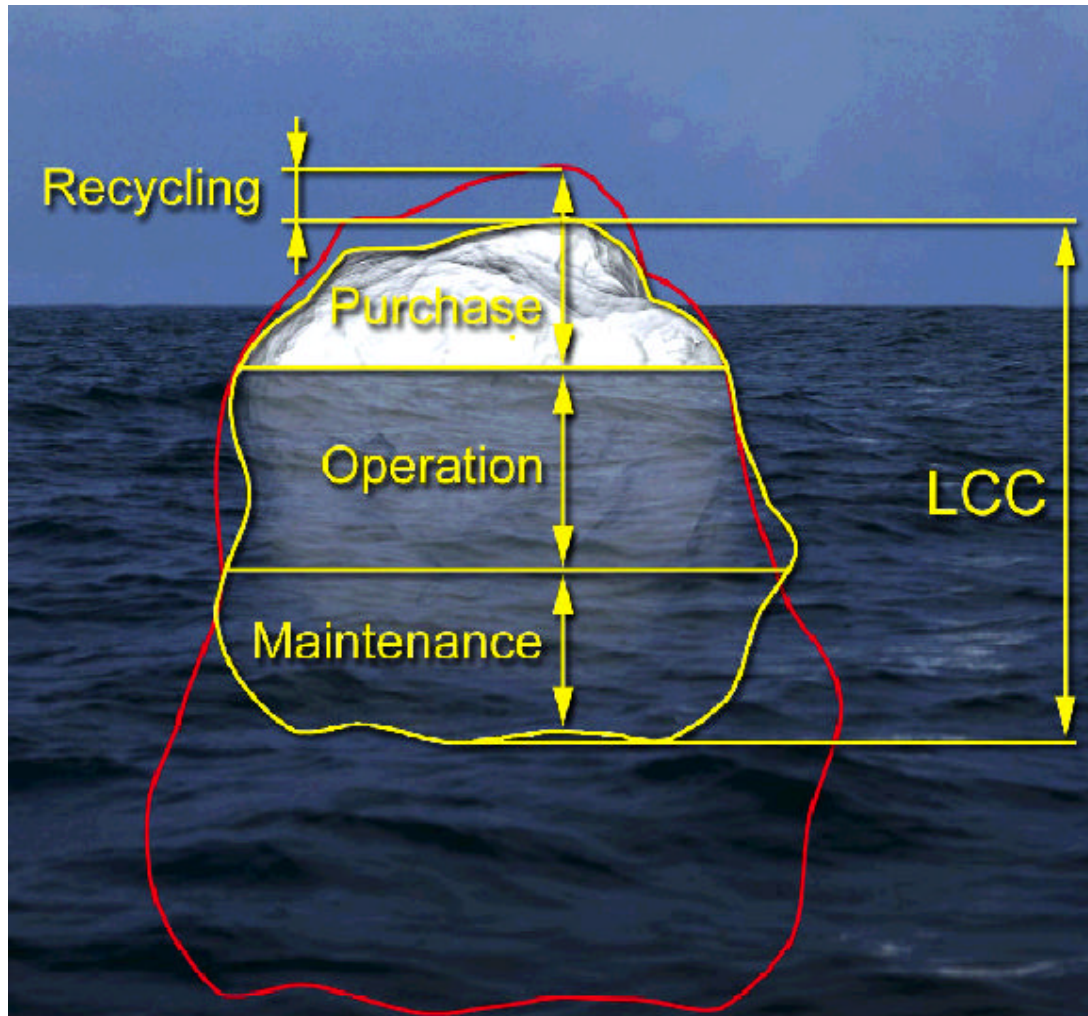
- High degree of protection
IP5x on enclosure
IP6x on joints
Encapsulated apparatuses

More cost efficient



Complete monitoring
- Maintenance on demand

More cost efficient



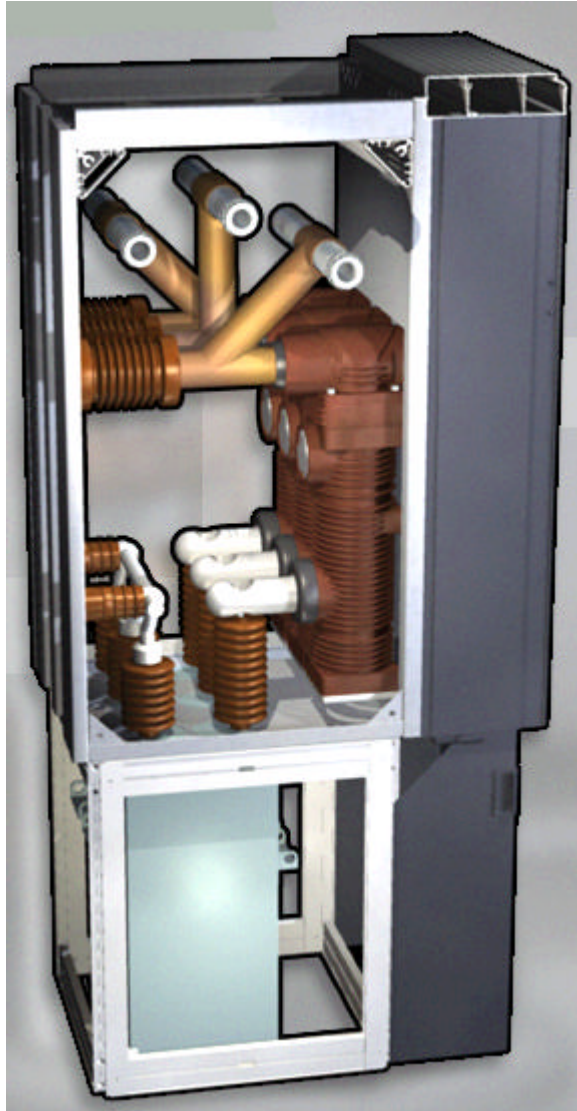
LCC
Life cycle cost

Technical data



Rated Voltage(kV)	12	15	24
BIL(kV)	75	95	125
Rated current (A)	3150	3150	2500
Short circuit current(kA)	50	50	40
Internal arc test(kA)	50	50	40

PFC panel



Integrated capacitor bank

Better supervision and control

Resonance protection

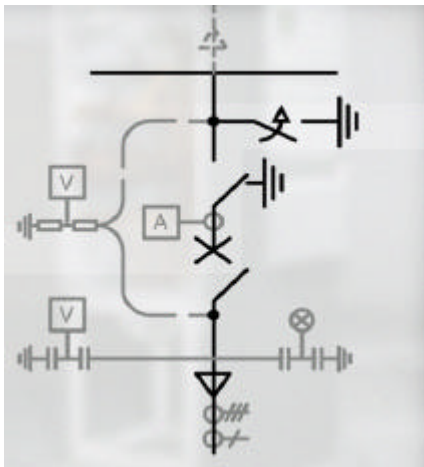
Less transients

Compensation power

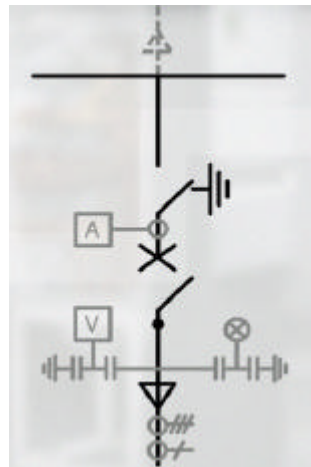
12 -17,5 kV 1,6 MVar

Panel types

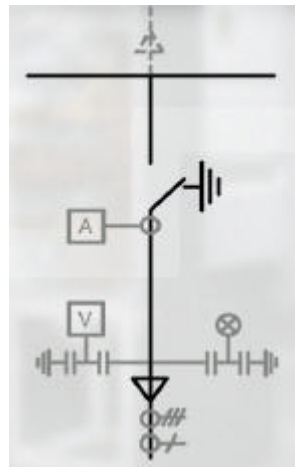
Incomer



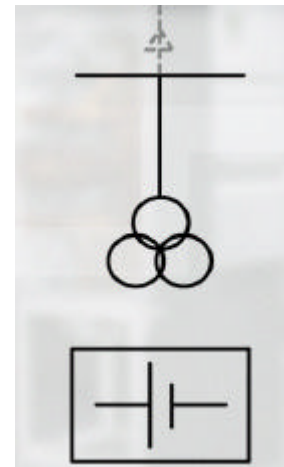
Outgoing feeder



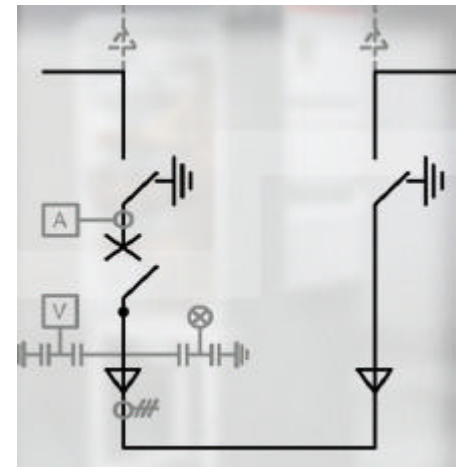
Disconn. feeder



Support panel



Sectionalizer



ABB