The future of food & beverage electrification

ABB Ability™ building tomorrow’s food & beverage plant
ABB Ability™ solutions for Industry 4.0

1712 – Industry 1.0
Thomas Newcome builds the first steam engine

1870 – Industry 2.0
Electricity is used for Industrial Production

1969 – Industry 3.0
Programmable logic

Today – Industry 4.0
Communications between people, services, and things

Do more
Transparency: monitor, control, manage

Know more
Visibility: assess, inform, measure

Do better
Predictability: optimize, predict, simulate

Together
Adaptability: collaborate, advice, re-think

Data collection
Connectivity

ABB Ability™

158 Yrs.
99 Yrs.
47 Yrs.
Food & Beverage factories

- Goods movements
- Packaging
- Site & process management
- Green generation
- HVAC
- Water treatment
- Batch processing
- Heating / Cooling
- Utility connection
ABB Ability™ values for Food & Beverage electrification

Food & Beverage factories of tomorrow

- Safety
- Production continuity & Energy management
- Asset performance & Optimization
- Flexibility & Sustainability

Scalability
Safety

People protection
MV and LV certified switchgears against internal electrical arc fault.

Active people and equipment protection
Fast acting and coordinated arc protection systems applicable on and MV and LV systems, and on new and existing switchgear, to increase safety and minimize downtime.

Digital asset
Personnel not exposed to high-voltage with sensor technology during testing
Self-monitored digital communication bus and devices
Production continuity and energy management

Power quality and stability
Integrated capacitor banks for power factor correction.
Modular and combined Uninterruptible Power Supply solution.

Energy management
Energy monitoring and reporting to evaluate and compare consumption.
Full control of energy flow, integrating utility, renewables and production.

Power availability
Load-shedding and peak-shaving to keep up a running critical loads and avoid extra-costs.
Automatic transfer switch ensuring power supply.
Full power management for critical processes.
Asset performance and optimization

**Condition monitoring**
Sensors to detect possible failure causes.
Switchgear condition monitoring to support troubleshooting and drive service activities.

**Predictive maintenance**
Site and multi-site asset health analysis to predict and notify potential faults, minimizing maintenance, while increasing safety and asset lifetime.

**Cyber asset management**
Electronic devices inventory, configurations traceability, security firmware updates notification, plant data and documentation back-up.
Flexibility and sustainability

**Digital switchgear**
Highly configurable and easily upgradable during lifetime.
Advanced sensor technology to lower switchgear power consumption and minimize spare parts.

**All-in-one protection**
Modular hardware and software solution to protect the electrical network, and adapt easily
Easy integration of renewables with automatic-synchronization function.

**Smart substation protection and control**
Centralized substation protection and control, ready to follow the evolving grid, with extensive application coverage.
Fully modular and upgradable software.
Scalable solutions according your production capacity and power need
ABB Ability™ global and local support

10 Digital solution centers

40 Digital service centers
ABB Ability™ electrification offering

**+ INTEGRATION**
Electrical and Automation system 800xA

**+ EFFICIENCY**
Electrical control system ABB Zenon

**+ FLEXIBILITY**
Substation protection and control SSC600, REX640, Relion®

**+ AVAILABILITY**
Load shedding and peak shaving cPMS

**+ RELIABILITY**
Switchgear condition monitoring SWICOM

**+ SAFETY**
Arc detection and suppression REA, TVOC, UFES

**Plant control**
Cloud base applications

**Electrical Control**

**MV-Switchgear**

**LV Power centers**

**LV Distribution boards**

**LV Motor control centers**

**+ RELIABILITY**
Electrical system asset health MyRemoteCare

**+ RELIABILITY**
Cyber asset management Data Care

**+ EFFICIENCY**
Energy monitoring EDCS

**+ FLEXIBILITY**
AIS / GIS, primary and secondary MV Digital switchgear

**+ AVAILABILITY**
Bus transfer, ring reconfiguration Relion®, HSTS, Emax2, Loop Control

**+ RELIABILITY**
Condition and energy monitoring MNS® Digital, NeoGear™ Digital

©ABB