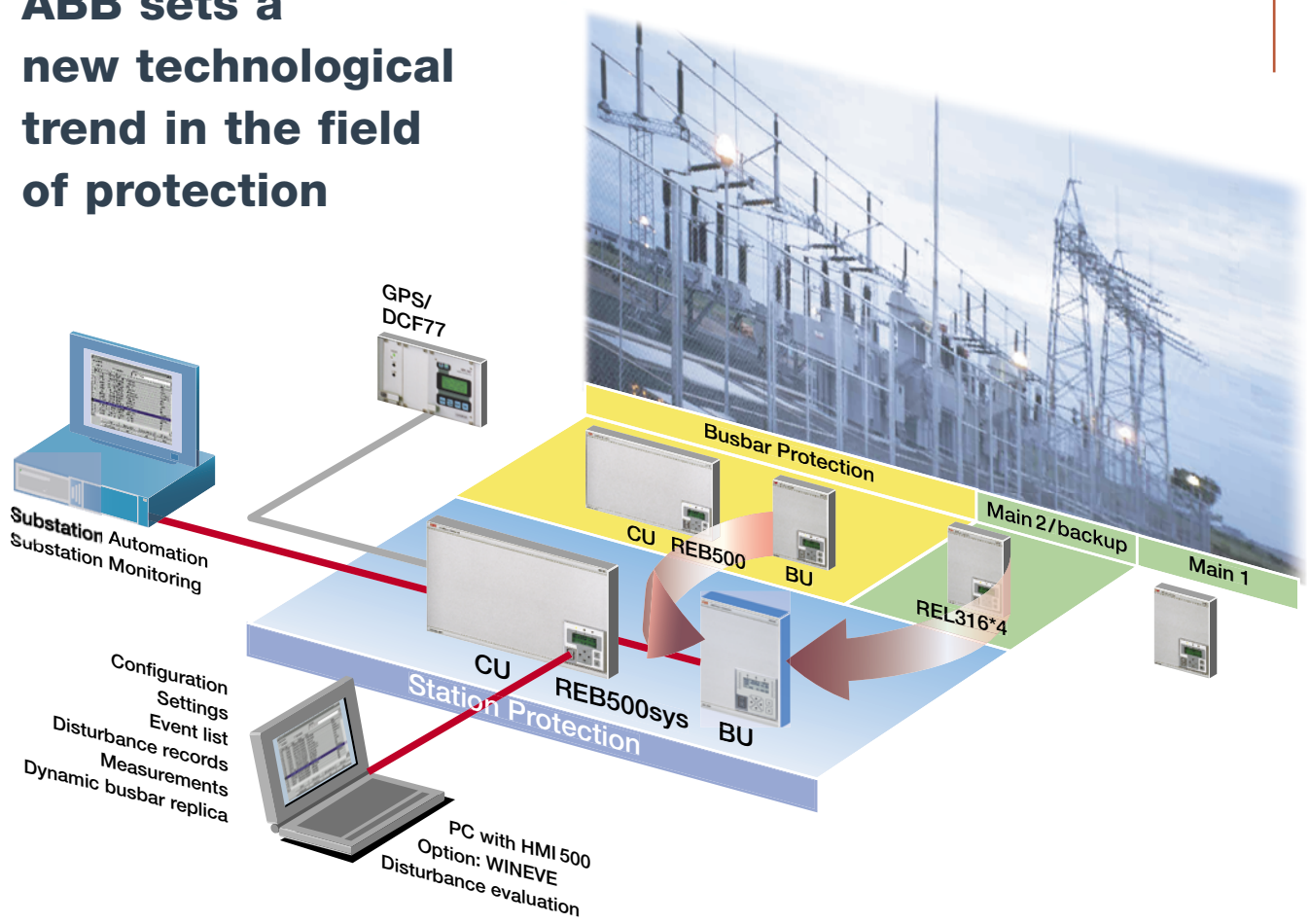
NEWSLETTER
Protection and Substation Automation – Market Communication: petra.reinhardt@ch.abb.com
2–6

REB500sys: The enhancement of the station protection scheme

ABB sets a new technological trend in the field of protection

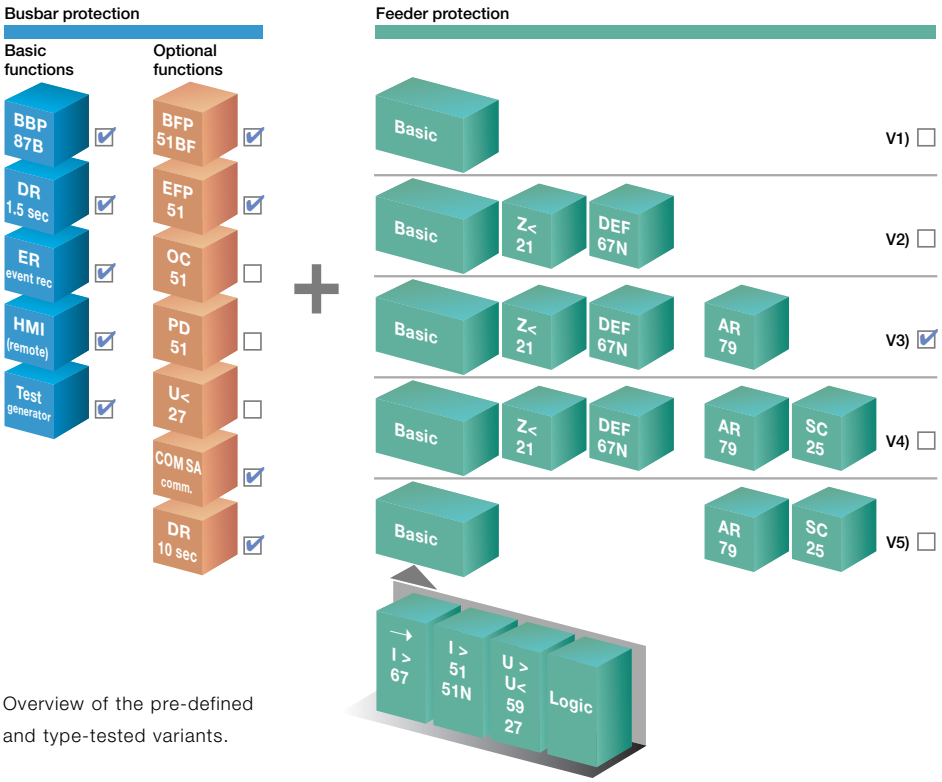


- The integrated system solution protecting and monitoring:
  - Busbars and breaker-failure
  - Line and transformer feeders (as Main 2 or back-up)
- Higher reliability and availability of the energy supply
- Reduction in project execution times and cost
- First station protection system has already been delivered

The REB500sys is a new system solution with a high degree of functional integration.

It covers the protection and monitoring of the whole substation, i.e. busbars, line and transformer feeders.

REB500sys is based on proven technology and software algorithms from ABB which are successfully employed throughout the world for many years.



Overview of the pre-defined and type-tested variants.

Application

REB500sys can be used as Main 2 or back-up protection with integrated busbar and breaker-failure protection at all voltage levels:

In substations with Main 1 and Main 2 feeder protection and busbar protection

- it simplifies the protection concept by functional integration of Main 2 feeder and busbar protection. The same level of substation protection is maintained whilst cost and space of an extra device are saved.

In substations with main and back-up feeder protection, but currently without busbar protection

- it increases the availability of the energy supply significantly as a result of employing busbar and breaker-failure protection integrated with main or back-up protection.

In retrofit projects

- it enhances the protection scheme and adds comprehensive monitoring

User Benefits

Reduced project and lifecycle cost

- Less hardware, cabling & space required
- Time-saving use of pre-defined variants
- Easy to use configuration & setting program
- Modular and uniform system with less spares

Improved reliability and availability of energy supply

- Fast fault analysis with central access to station-wide event and fault records
- Dynamic busbar replica and measurement display allow status-monitoring
- Monitoring of switch positions, transformers and the system itself facilitates immediate recognition of failures and optimised maintenance

Reliable protection of investments

- One system for comprehensive substation protection
- Extensible and upgradeable for growing requirements
- Interfaces with substation automation (SA) and/or monitoring (SM) systems

Features

decentralised architecture
- of well-proven REB500

modular and flexible protection
- for single and double busbars

easy extension for feeders
- up to 59 bay units and 32 zones

incorporation of the functionality
- of REB500 busbar and REL316*4 feeder protection

five pre-defined variants for ease
- of application and standardisation

central unit provides station-wide
- busbar protection, monitoring and remote access

bay units autonomously handle
- all feeder protection functions including monitoring and recording

fibre-optic connection between
- central and bay units allows installation close to the switchgear while ensuring high electromagnetic compatibility.

For more information please refer to the responsible ABB sales engineer for your country or to the address mentioned below

First station protection project for 220 kV substation in Spain

The first REB500sys has already been delivered to the 220kV substation Quart de Poblet of Hydro Cantabrico, one of the biggest utilities in Spain. Commissioning is scheduled for mid 2002.

ABB Switzerland Ltd
Utility Automation
Brown Boveri Strasse 6
CH-5400 Baden/Switzerland

Phone +41-58-585 77 44
Fax +41-58-585 55 77
e.Mail substation.automation@ch.abb.com

www.abb.com/substationautomation

© Copyright 2002 ABB. All rights reserved.

The IndustrialIT wordmark and all mentioned product names in the form XXXXXXIT are registered or pending trademarks of ABB.