Medium Voltage Products Success Story

UniGear Digital

ABB´s UniGear Digital powers a research center in the Czech Republic

The innovative solution in MV switchgear supports researchers in their work.

The Regional Innovation Centre for Electrical Engineering (RICE) at Czech Republic's University of West Bohemia has chosen ABB's innovative UniGear Digital solution for its new research center.

Developed and produced at ABB's medium-voltage (MV) factory in Brno, Czech Republic, UniGear Digital is the new MV switchgear that combines well-proven switchgear design with an advanced approach to protection, control, measurement and digital communication. It is based on an optimized integration of current and voltage sensors into MV switchgear, combined with the latest Relion® protection relays and IEC 61850 communication.

RICE aspires to become one of the foremost research facilities in the Czech Republic and Europe. RICE's primary research areas include E-mobility and complex transport systems, power engineering and molecular electronics and sensors.

This new research center will consists of a MV laboratory hall and the laboratory for testing power electronics and transportation systems, where UniGear Digital will be used to supply power to special laboratories focused on material research, particularly research on organic-based sensors, including the so-called "clean room", a special microscopic laboratory or X-ray diagnostics.

The scope of the contract includes the supply of 14 panels of UniGear Digital solution 7.2 kV and 10 kV equipped with sensors and REF615 protection relays a part of ABB's Relion® 615 product series.

RICE saw UniGear Digital as an innovative solution that harmonizes with its own ideas of implementing a smart solution that includes monitoring of parameters for all levels of networked equipment with connection to the upstream system via IEC 61850-8-1 communication protocol. RICE has an innovative testing station for assessing intelligent industrial systems featuring some atypical parameters in terms of MV power supply.

The project was awarded in cooperation with Zlínstav a.s. and Cofely a.s. both Czech engineering, procurement and construction companies. Commissioning is scheduled for beginning of the year 2015.

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