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UK Power Networks adopts PASS M0 switchgear



To prepare for installation of a number of modules on its 132 kV transmission network in the East of England, UK Power Networks has approved ABB's compact PASS M0 switchgear.

The modules will act as the main grid connection points for major new solar photovoltaic (PV) farms, which will be connected to the 132 kV network to help spread the demand on UK Power Networks' 11 kV and 33 kV networks.

PASS M0 is a form of hybrid high-voltage switchgear that combines air-insulated busbars with a GIS housing that integrates circuit breaker, one or more

combined disconnect/earthing switches, bushings for connection to single or double busbar systems and a current transformer in one compact module. Not only is the switchgear extremely compact but it also gives flexibility as it can be connected with various combinations of busbar and cable to suit individual site requirements. It also has full approval from the Energy Networks Association (ENA).

Another advantage is that PASS M0 can perform as a metering breaker that measures the quantity of power fed into the grid as it integrates high quality tariff-code current transformers (CTs) and voltage transformers (VTs).

Network Rail to install 100 FSKII+ circuit breakers

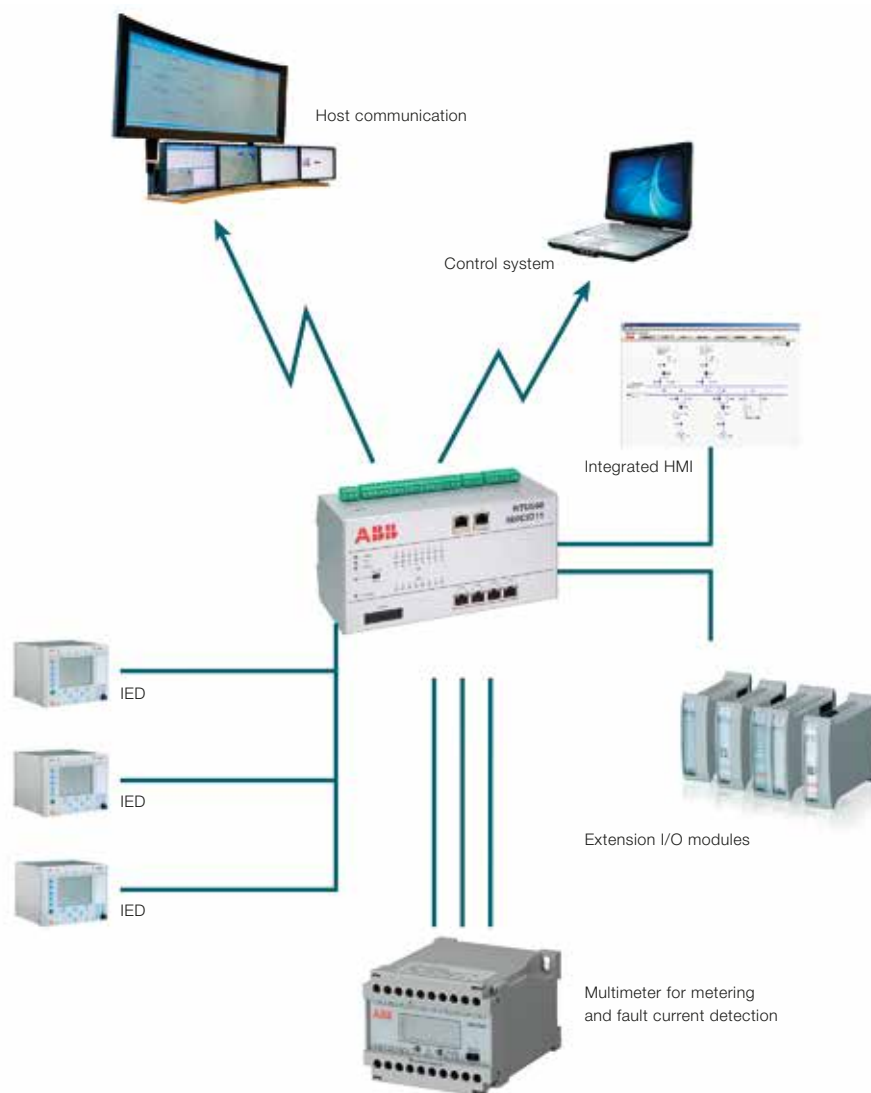
Network Rail will install more than 100 of ABB's FSKII+ vacuum circuit breakers at seven trackside substations on the East Coast Main Line (ECML). The major order is part of Network Rail's ECML power upgrade to meet growing demand for passenger and freight traffic. The ECML is a major rail artery that provides a direct link between London, the north east of England and eastern Scotland and is designated as having Trans European Network (TEN) status.

ABB developed the FSKII+ specifically for single and two-phase railway traction power supply applications. Its advantages are its compact installation footprint, as well as simple and easy installation and low maintenance requirements. Plus it is currently the only medium voltage AIS (air insulated switchgear) that has Network Rail product approval for trackside substations.



FSKII+ circuit breakers have Network Rail product approval for trackside substations

ABB remote terminal units to play vital role in telent's Network Rail SCADA renewal project



Typical RTU configuration



Hundreds of ABB's new generation RTU 540 remote terminal units (RTUs) will be integrated into Network Rail substations during a project being carried out by telent to renew the SCADA (Supervisory Control and Data Acquisition) system in the rail operator's Southern Electric region.

The new SCADA master station system will control traction power and distribution for Network Rail as an essential part of the planned electrification investment being made in the UK Rail network. The new system will provide the complete control interface for Network Rail to monitor the network remotely, carry out isolations and implement automatic execution and service restoration.

The RTUs will provide the vital telemetry and remote control links to the main traction substation equipment, including transformers, rectifiers, switchgear and circuit breakers as well as important ancillary services such as door entry alarms and other

security functions. Using high-speed fibre optic connectivity, the RTUs will interface with telent's head end SCADA system in Network Rail's control centre.

telent and Network Rail have standardised on the RTU 540 – the medium size module in ABB's new generation 500 series – as it provides a flexible, scalable and compact solution that delivers maximum functionality within the restricted space available in trackside substation enclosures. The RTUs will use classic hard-wired inputs while at the same time utilising the DNP 3.0 protocol for communications with the telent Control centres. However, they also have built-in cyber security features and capability to interface with equipment based on the IEC 61850 standard for substation communications, ensuring they are totally future-proofed to operate with any new primary equipment that incorporates modern IEDs (intelligent electronic devices).

Danny Lyonette, ABB UK Sales & Marketing Manager for Substation Automation said: "Network Rail's new SCADA is a very

prestigious project that provides the first large scale UK deployment for our new generation RTU 540 modules. Our selection was based on the successful completion of telent's stringent approval process, one of the key factors was the module's compact design, capable of handling up to 5,000 information points."

telent is due to complete the project in 2017 and ABB has already supplied the first 20 RTU 540s out of a total of 242 RTU 540 modules for traction substations across the region, which covers south London, Dorset, East and West Sussex, Hampshire and Kent where trains are powered by a 750 V DC supply to the third rail.