



Trans-Rupter II® Transformer Protector–Model SE ... Perfect Fit for a Remote Industrial Substation

Customer Problem

A mine in northeast Utah needed additional power for their tailing processing facility and a planned future expansion to their conveyor system. After consulting with the local electric utility, they decided that the best long-term solution would be to bring in an additional set of 69-kV transmission lines and construct a new distribution substation to provide the extra power.

S&C Solution

Siting the new substation proved difficult . . . the mine is located in a remote area away from other significant electric loads. Neither the mine nor the utility wanted to incur large real estate and capital expenses usually associated with constructing a substation. . . equipment selection became a key issue.

The mine specified a 69-kV S&C Trans-Rupter II Model SE to protect their new 3.75/4.2-MVA distribution transformer. Model SE is ideal for remote substation applications such as this, where a ready source of control power is not present. It provides three-phase protection, fast 3-cycle circuit interruption, and a 31.5-kA interrupting rating. The self-powered overcurrent relays provide sophisticated protection at low-cost, in a compact, easy-to-install package. Internal bushing current transformers provide sensing for the overcurrent relays.

A V-type disconnect (not shown) was installed on the dead-ending structure to pick up transformer magnetizing current. S&C Loadbuster Disconnect® Switches were installed on the low-side to provide an isolating disconnect for future transformer maintenance.

69-kV Trans-Rupter II Transformer Protector, Model SE.



Results

The new distribution substation significantly increased available power for the mine and will allow future expansion of their operations. They're fully satisfied with the performance of the Trans-Rupter II Transformer Protector in this application and plan to use it in future substation construction projects.