

# 11KV/1000V DEVELOPMENT SUBSTATIONS



**Ampcontrol's Development Substations can include up to 10 outlets and are offered in both flameproof and ingress protected (IP66) enclosures, built to customer specifications.**

Ampcontrol design and manufacture a range of underground substations up to 7.5MVA and customises each to meet the applications required. Development Substations are typically 11KV/1000V, up to 2.5MVA and have been manufactured in either flameproof and ingress protected (IP66) variations.

11KV connections are typically provided via a flameproof coupler and may incorporate switched or non-switched through supplies. All 11KV equipment is housed in the High Tension (HT) Enclosure of the substation. Integrated into the HT enclosure is the isolation, earthing and protection required for the main transformer. Protection will include meeting all requirements for electrical protection of a substation as detailed in AS4871.2012.

Transformer options available include Nitrogen filled, dry type transformers (GNAN cooling system), mineral oil filled (ONAN) transformers and high flash point vegetable or silicon based oils. All GNAN transformers are built to meet IEC standards for explosion protection technique Ex p. The oil filled transformer options provide are built to Australian standards for the class of transformer specified.

1000V power distribution from the substation may include up to 10 outlets in either IP66 or flameproof options provided from the Low Tension (LT) Enclosure.

Each LT enclosure is customised to meet specific mine site communication requirements and can include PLC based control systems, HMI interface capabilities and SCADA packages. Customer required functionality including fan interlocking and safety rated (SIL) isolation and earthing systems can be incorporated into the control and HMI systems to ensure safe and reliable operation from behind closed doors.

The 1000V power distribution outlets are provided with protection by our integrated protection relays. This ensures the 1000V distribution generally meets the electrical protection requirements of AS4871.2012.

The complete substation including HT, Transformer and LT enclosures are typically offered on a wheel mounted skid with rated towing and lifting facilities for easy relocation around site. Options are available for powered track systems or braked wheels to be utilised in the design.

Each substation upon completion follows through a process of Factory Acceptance Testing, Compatibility Testing (where necessary) and Commissioning to ensure operational status on delivery. Manuals including flameproof dossier and drawings are provided and options are available for ongoing support for each product including lifecycle management.

## FEATURES

- Supply power - 11kV (Options for 6.6kV available)
- Output power - 1000V
- Typical power ratings - 1.5MVA to 2.5MVA
- Explosion proof or IP66
- Compliant to all Australian and state legislative requirements
- Up to 10 outlets
- Standard mounting - skid on wheels
- Additional mechanical protection available
- All outlets can be the same configuration, making all outlets universal
- Ampcontrol outlets provided with machine recognition
- Communication options including fibre optic/ ethernet connectivity



1300 267 373

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