

# OUTLET CASSETTE SYSTEM (OCS)



**Ampcontrol's Outlet Cassette System (OCS) provides a safe compact solution for individual outlet isolation and visible earthing of mining equipment at 1000V and above.**

Providing line and load side isolation with a visible earth connection for each outgoing circuit at the touch of a button, the OCS reduces risks through eliminating residual capacitive charge exposure to the operator and the potentially explosive environment, whilst providing a positive lockable earth position for electrical work.

Ampcontrol's standardised cassette design provides a compact solution for individual outlet isolation and visible earthing, without the cost and space required by discrete isolators and earth switches.

The OCS incorporates Ampcontrol's patented integrated protection relay technology. An intelligent device based on the latest microprocessor technology, the fully integrated cassette specific relay provides all of the necessary functions required for protecting electrical outlets supplying underground mining machinery.

All of the protection functions are combined into a compact, plug in unit, which can be easily removed in situ without the need to remove the heavier power cassette, not only minimizing downtime but personnel manual handling risks.

## Application

The OCS integrated protection relay is certified for use in underground mining operations, for the protection of mining equipment to AS2081 and intrinsically safe Ex ia for the relevant protective functions.

Ampcontrol's OCS is provided as part of an Ampcontrol designed and manufactured DCB.

## FEATURES

- Individual outlet isolation and visible earthing
- SIL 2 rated safety interlocking
- Fully integrated contactor, CCM, CTs and protection relay
- Outlet specific parameter dongle eliminates relay programming on change out
- Easy relay removal from the cassette
- High voltage insulation test improves safety and maintains efficiency
- Improved machine communications negates need for dedicated outlets with increased noise tolerance
- Programmable via the local HMI display
- Diode or remote termination unit operation provides operational flexibility
- Event log provides an invaluable diagnostic tool
- Ethernet communications provides reliable and fast communications to PLC and SCADA
- Plug in unit providing for ease of replacement without removing power cassette
- Thermal modelling for accurate motor protection



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## Cable insulation test feature

As part of a “pre-start” check, an IS earth fault lockout, 3 phase insulation test is applied to the machine cable. If the measured resistance is above the pre-set level then an automatic high voltage DC insulation test to earth of the cable is performed. A resulting successful test allows the main contactor output to energise and close the contactor.

## Machine communication

Patented machine communication is provided through the use of a machine mounted remote termination unit (RTX) connected between the trailing cable pilot wire and machine earth. The RTX stores and automatically uploads the machine protection settings and ID when a cable is inserted into any power outlet.

## Information display and monitoring

Extensive information display and monitoring features are available via independent HMI displays and networked SCADA to facilitate easy fault finding with the use of “run permissive screens”.

