

Cummins Generator Controls

The Cummins Power Solutions team ensure our generator sets are controlled using the most reliable of integrated microprocessor based control systems, integrating voltage regulation and generator set controls into one unit, thereby reducing points of failure and improving total machine performance.

PowerCommand®

PowerCommand® is a microprocessor based generating set monitoring and metering control system that provides a reliable, cost effective solution to integrated digital paralleling and complete engine management.

Paralleling systems

PowerCommand® paralleling systems are designed around dedicated-purpose controllers that are prototype-tested for reliability and performance.

PowerCommand® paralleling systems deliver the flexibility demanded by your complex applications. We use common control blocks with prototype-tested components. These systems deliver the features and performance you require and are supported by the industry's only local paralleling service organisation.

Demonstrated reliability

Integrated paralleling in the generator set controls offers fast synchronising. Any number of generator sets can be synchronised in less than 15 seconds in most applications. PowerCommand® paralleling systems give you demonstrated reliability:

- Industry-leading mean time before failure (MTBF) data
- Innovative failure mode effect analysis
- Prototype testing to validate system design
- Distributed logic designs that isolate issues by eliminating single points of failure

Automatic Transfer Switches

PowerCommand® automatic transfer switches optimise performance and simplify operation and service. Transfer switches provide all necessary supply sensing, generator starting and supply transfer functionality in one convenient unit.

GTEC series transfer switches, covering the range 40 - 2000 amps - provide normal and generator set source monitoring, generator set starting, and load transfer functions for emergency and optional standby applications.

Model Features # Pole Size (Amps)

- GTEC - Basic feature heavy duty transfer switch 3/4P 40A - 2000A
- ACB-ATS 3/4P, 1250 - 6300A
- LV & MV paralleling switchgear

Digital Master Controllers

PowerCommand® Digital Master Controllers are designed and manufactured around standardised control blocks - delivering increased reliability, flexibility and performance.

Our Digital Master Controllers (DMC) provide seamless interface between the generator, PowerCommand® Controller (PCC), the site switchgear and distribution systems. Furthermore, the DMC is a fully automatic controller suitable for unattended applications. DMCs are configurable for use in many power systems architectures, including isolated bus paralleling and infinite bus (utility) applications.

DMCs include utility paralleling functions for peak-shaving and base loading and have a broad range of operational diagnostic functions. These greatly enhance systems reliability as well as easy to use operator panel and LED annunciators.

Cummins PowerCommand Generator Control Systems

AmpSentry™

AmpSentry™ is a comprehensive monitoring and control system integral to the PowerCommand® control that guards the electrical integrity of the alternator and power system by providing protection against a wide array of fault conditions in the generator set or in the load. It also provides single and 3-phase fault current regulation, so that downstream protective devices have the maximum current available to quickly clear fault conditions, without subjecting the alternator to potentially catastrophic failure conditions.

Amp Sentry™ is a protection function integral to PowerCommand® controllers that is designed to protect the alternator from damage. In MV applications, an additional benefit arises from this feature in that the first generator on-line can begin to energise multiple transformer substations, without the risk of overload damage presented by the de-energised transformers.

This capability dramatically reduces the time taken to fully energise a typical MV ring circuit. In many hospital applications, where essential loads typically need to be supported within 15 seconds, this presents a major advantage.

Amp Sentry™ will limit the generator output current to 300% of the rated current for up to a maximum of 10 seconds (refer to graph) before de-exciting the alternator (preventing thermal damage to the alternator).

