

# PowerCommand® Paralleling Systems

Robust Paralleling System Solutions For Reliable Performance





# PowerCommand® Paralleling Systems Power And Flexibility On Demand

PowerCommand digital paralleling systems from Cummins Power Generation provide more functionality and robust controls than any other paralleling system available today.

Built using a distributed logic concept these systems integrate paralleling controls mounted on generator sets, low or medium voltage switchgear, automatic transfer switches and digital master control (DMC) for supervisory functions.

## Versatile by design

PowerCommand paralleling systems deliver reliable standard control product solutions and the custom flexibility demanded by your complex applications. Using common control blocks with prototype-tested components these systems deliver the features and performance you require.

## **Proven reliability**

PowerCommand paralleling systems give you demonstrated reliability:

- Innovative failure mode effect analysis
- Prototype testing to validate system design
- Distributed logic designs that increase reliability



More information on PowerCommand paralleling systems here









# Digital Master Control (DMC)

## Intuitive and adaptable for diverse applications

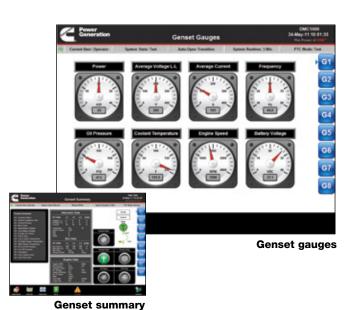
At the heart of a Cummins paralleling system is a PowerCommand Digital Master Control (DMC) designed to directly interface with Cummins Power Generation paralleling controls and ATS controls. The DMC is designed for low or medium voltage, isolated and utility paralleling applications, providing system-level functions, including:

- Generator control and protection
- Circuit breaker and sequence of operation control
- Master synchronizing
- Load management
- Extended paralleling configurations
  - Generator set metering point (base-load)
  - Utility metering point (peak-shave)

An intuitive system operator interface is used for system configuration, monitoring and diagnostics. Other key features include both standard and customisable system single line monitoring, real time and historical trending and complete system event and alarm logging.

## **Customisable and easy-to-use**

As facility use changes, often the control system needs to change or adapt. With our standard PowerCommand digital master controllers, system flexibility and reduced site configuration complexity can be achieved with the use of standard software designed for multiple system topologies.





# Our Digital Master Control Range

Our digital master control range includes models for operating up to 4, 8 or more generator sets. Each system comes with easy-to-use help screens and is capable of supporting multiple system topologies.



#### **DMC 1000**

- Control for systems with up to 4 generators and 1 utility
- Automatic Transfer Sequence control
- Open & Closed Transition sequence control
- Extended paralleling control
- Automatic Load Demand control
- Automatic Load-Add control
- Automatic Load-Shed control

- Supports a range of system topologies
- LED system status annunciator
- Easy to use LCD Operator control panel
- True RMS bus metering
- Configurable
- Modbus RS485 interface

## **DMC** 1500



- Control for systems with up to 8 generators and 1 utility
- 15" Colour touch-screen control panel
- Automatic Transfer Sequence control
- Open & Closed Transition sequence control
- Extended paralleling control
- More information
- Automatic Load Demand control
- Automatic Load-Add control

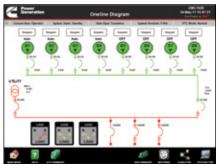
- Automatic Load-Shed control
- Manual generator set control
- Supports a range of system topologies
- True RMS bus metering
- Trending (real-time and historical)
- Configurable
- Reporting and data logging
- Modbus RS485 or Modbus TCP/IP interface

#### **DMC 200/300**



- Control for systems with any number of generators, utilities and bus couplers
- 15" Colour touch-screen (option for 17" or 19")
- Automatic Transfer Sequence control
- Open & Closed Transition sequence control
- Extended paralleling control
- Project specific control sequences
- Automatic Load Demand control
- Automatic Load-Add control
- Automatic Load-Shed control

- Manual control
- Supports project specific system topology
- Real-time trending
- LED system status annunciators
- True RMS bus metering
- Remote user interface (optional)
- Hot Standby PLC (optional)
- Modbus RS485 interface or Modbus TCP/IP interface and an integrated web server for remote viewing of HMI screens. Customised BMS interface as required



Single line diagram



**Network ATS summary** 

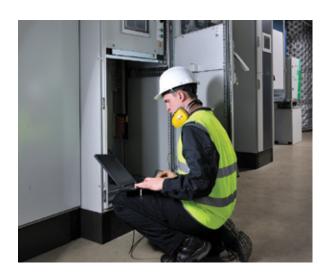


**Load demand control** 

## Strong support and service

All our PowerCommand® products are backed by comprehensive warranties to give you complete peace-of-mind. This is coupled with technical support and expertise from our worldwide network of distributors and factory-trained technicians, who are there to help and advise whenever you need it, wherever you are located.

With this world-class network and service, you can trust Cummins to ensure your products operate reliably at all times.



Feature/Option	DMC1000	DMC1500	DMC 200/300
Number of Generator Sets	<= 4	<= 8	>= 1 (unlimited)
Number of Loads	<= 6	<= 10	(unlimited)
Number of Utility	<= 1	<= 1	(unlimited)
Number of Bus Couplers	0	0	(unlimited)
User Interface	6 Line LCD	15" Colour	15" Colour
			(17" or 19" option)
Neutral Earth Contactor	No	Individual	Individual
Genset Summary	No	Yes	Yes
Genset Manual Control	No	Yes	Yes
ATS Summary	No	Yes	Yes
Trending	No	Yes	Yes
Plant Test Report	No	Yes	Yes
Bus and Mains Metering	Yes	Yes	Yes
Alarm Log	No	Yes	Yes
Redundancy (optional)	No	No	Yes
Optional Customisation	No	No	Yes

# Integrated System Solutions

All Cummins Power Generation switchgear solutions are designed to work seamlessly with the PowerCommand® paralleling digital master controllers.

Cummins Power Generation undertakes the system design from both a power and control systems perspective providing reliable and cost effective system solutions for all your paralleling system applications.

#### Fully engineered and tested

To complement the digital master controller product range Cummins Power Generation provides switchgear solutions that are available for low and medium voltage systems, which are designed and manufactured in accordance with IEC standards.

The integrated systems design (combined switchgear and digital master controller) is based on the required 'system sequence of operation' taking account of normal system operation, maintenance and potential failure scenarios.



System designs are available with the digital master controller either fully integrated as a part of the switchgear design or stand-alone from the switchgear depending on your specific project requirements.

Our integrated switchgear and controller systems reduce initial design costs and on-site installation times. Your system will be fully tested and complete prior to arrival at the project site.



# Worldwide Support And Expertise At Your Service

# Around 600 branches in more than 190 countries and territories

In almost every corner of the world, an expert Cummins distributor is the first line of support for application, commissioning, troubleshooting, preventive maintenance contracts and aftermarket service requirements for every aspect of the power system.

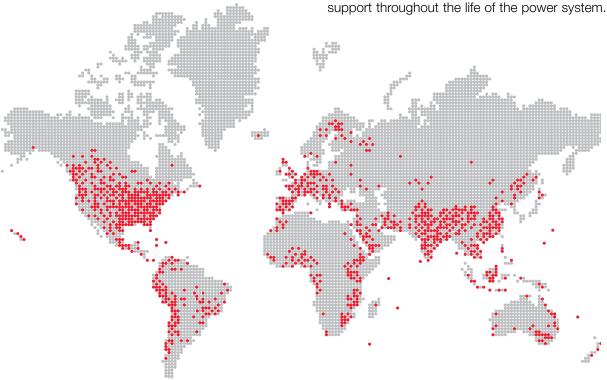
With sales staff and service technicians numbering in the thousands, and local parts inventories, Cummins distributors provide complete power system accountability worldwide. Operators and specifying engineers need only one point of contact for the entire power system, saving time and simplifying complicated integration and service scenarios.

## Dependable systems and expert advice

Regardless of the specific application, Cummins Power Generation provides the consulting expertise and integrated power systems that deliver reliable performance under any circumstance.

With robust diesel and gas generator sets, paralleling systems, transfer switches and advanced remote monitoring capabilities, our integrated systems offer the highest degree of design and performance control available.

Our professional staff have a proven track record of successful system integrations worldwide. And, when it comes to being on the front lines of power system implementation, Cummins' seasoned experts provide true turnkey services — from design assistance, commissioning and installation to aftermarket support throughout the life of the power system



An international network of branches covering five continents



Asia Pacific 10 Toh Guan Road #07-01 Singapore 608838

Phone 65 6417 2388 Fax 65 6417 2399

Brazil Rua Jati, 310, Cumbica Guarulhos, SP 07180-900 Brazil

Phone 55 11 2186 4195 Fax 55 11 2186 4729

China
No. 2 Rongchang East Street
Beijing Economic and Technological
Development Area
Beijing 100176
P.R. China

Phone 86 10 5902 3000 Fax 86 10 5902 3199

Europe, CIS, Middle East and Africa Manston Park, Columbus Ave. Manston, Ramsgate, Kent CT12 5BF United Kingdom

Phone 44 1843 255000 Fax 44 1843 255902

India 35A/1/2, Erandaqana Pune 411 038 India

Phone 91 020 6602 7525 Fax 91 020 6602 8090

Latin America 3350 Southwest 148th Ave. Suite 205, Miramar, FL 33027 USA

Phone 954 431 5511 Fax 954 433 5797

Mexico Eje 122 No. 200 Zona Industrial San Luis Potosí, S.L.P. 78395 Mexico

Phone 52 444 870 6700 Fax 52 444 824 0082

North America 1400 73rd Ave. NE Minneapolis, MN 55432 USA

Phone 763 574 5000 USA Toll-free 877 769 7669 Fax 763 574 5298

## Our energy working for you.™ power.cummins.com

© 2014 Cummins Power Generation Inc.
All rights reserved.
Cummins Power Generation and Cummins are registered trademarks of Cummins Inc.
"Our energy working for you." and Power Suite are trademarks of Cummins Power Generation.
Other company, product, or service names may be trademarks or service marks of others.
Specifications subject to change without notice.
EMERSB-5892-EN



For more information contact your local Cummins distributor.
To find the one nearest you visit power.cummins.com