

Transfer Switches



Power
Generation



PowerCommand®
Transfer Switches

PowerCommand[®] for true power system reliability, flexibility, and ease of use.

THE POWER OF ONE™

From the start, Cummins Power Generation has proven that a systems approach to power generation results in the highest reliability, and the easiest installation, along with low operating and maintenance costs.

As the only single-source manufacturer of engines, alternators, digital controls, transfer switches, and digital paralleling systems, Cummins Power Generation has led the way in the seamless integration of power system technology. It's an approach that has not only created superior power systems, but superior performance as well. That's why our transfer switches are relied upon in applications around the world.

Only with Cummins Power Generation can you get PowerCommand pre-integrated digital power systems – systems that are designed, built, tested, and serviced by one manufacturer.

THE SYSTEM WITH NO EQUAL

Think of it – one pre-integrated system that is specifically created to work as a single unit. It's what we call the *Power of One*. And whether you rely on your power system for prime-rated or standby power, or paralleling with your local utility, you'll find PowerCommand power systems deliver the performance you need – *reliability, flexibility, and ease of use*. All in one simple-to-specify system backed by one of the largest power generation sales, service, and support organizations in the world.

Compare our technology to anyone's. Try to find another pre-integrated power generation system manufacturer. You'll quickly see that PowerCommand is the power system with no equal.



Cirent Semiconductor in Florida and Twin Cities International Airport in Minnesota use PowerCommand transfer switches, gensets, and digital paralleling systems for peaking and standby power.



A KEY ELEMENT OF A SUPERIOR SYSTEM

PowerCommand transfer switches provide safe, dependable power transfer between the primary sources and critical loads. The microprocessor-based controls optimize performance, and simplify operation and service. All PowerCommand transfer switches include unique features that aren't available, even as options, on some brands of transfer switches. These features enhance performance and save time and money:

- Mechanical and electrical interlocking prevents source-to-source connection through the power of control wiring.
- Plug connections, door-mounted controls, ample access space, and compatible terminal makings allow for easy access and service.
- High visibility LED bar graph provides at-a-glance load monitoring.
- Configurable through the operator panel or InPower™ PC-based software.
- System communications and remote monitoring for increased flexibility.



AUTOMATIC TRANSFER SWITCHES (OTPC)

Designed to provide safe power transfer between primary sources and critical loads.



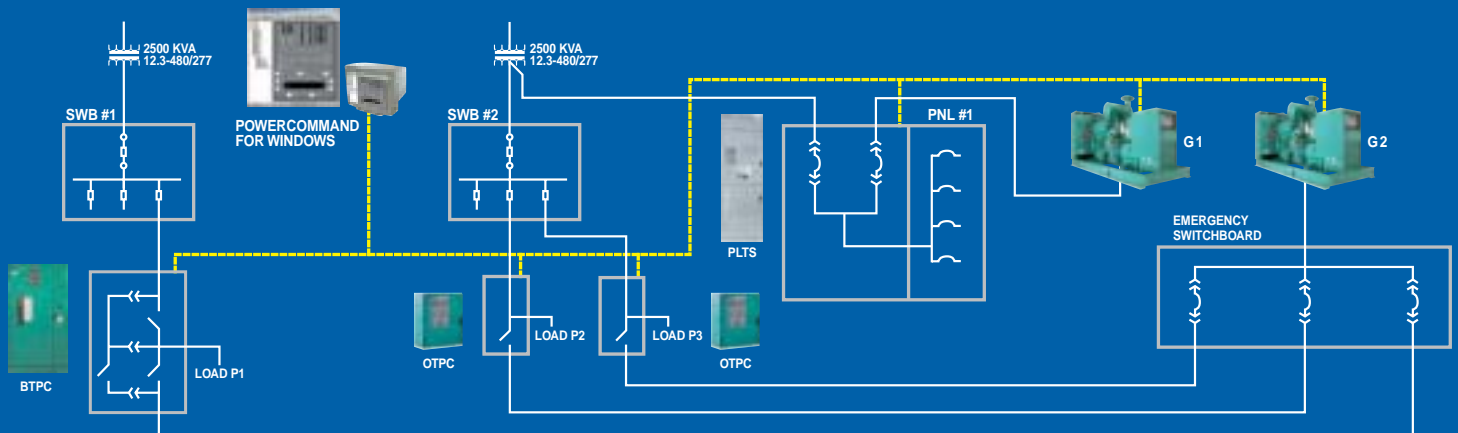
BYPASS ISOLATION TRANSFER SWITCHES (BTPC)

Designed to provide redundant power transfer and retransfer for critical-need applications that must maintain power to the load.

Legend:

----- Network / SCADA wires

POWERCOMMAND SYSTEM INTEGRATION



PowerCommand Transfer Sw

APPLICATIONS

PowerCommand Automatic Transfer Switch



- Utility-to-Genset



- Utility-to-Utility



- Genset-to-Genset

The power, flexibility, simplicity, and ease of use of Cummins Power Generation transfer switches are obvious from even a quick inspection. Unlike conventional transfer switches, PowerCommand transfer switches include unique features that enhance reliability, performance, and safety.

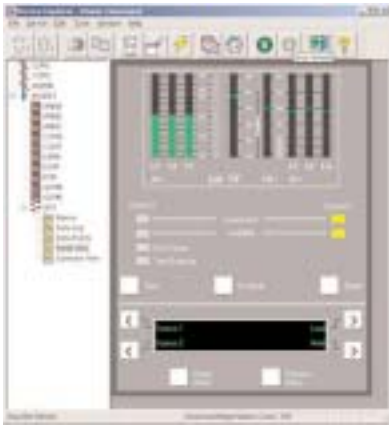
CONVENTIONAL TRANSFER SWITCHES	POWERCOMMAND® TRANSFER SWITCHES
Solenoid operation <ul style="list-style-type: none"> ■ High initial force on actuation ■ Not rated for continuous duty 	Linear motor actuation <ul style="list-style-type: none"> ■ Linear motor applies constant force through the length of travel of the mechanism for more consistent transfer ■ Rated for continuous duty, can be actuated once every 30 seconds indefinitely* ■ Protected with self re-setting circuit breaker ■ No blown fuses to prevent transfer
Programmed transition not available or is a significant cost increase <ul style="list-style-type: none"> ■ In-phase monitor may "hang-up" and not transfer back to utility 	Programmed transition is standard <ul style="list-style-type: none"> ■ Allows motor loads to decay prior to transfer ■ Insures a reliable transfer back to utility and alleviates nuisance tripping of downstream breakers
Manual operating handle not permanently attached <ul style="list-style-type: none"> ■ Difficult to use ■ Typically made of metal 	Manual operating handle permanently attached* <ul style="list-style-type: none"> ■ Easy to operate, no fumbling to insert in a slot or hole ■ Made of high strength insulated polycarbonate
Not UL 1008 listed for use with current limiting breakers	UL 1008 listed for use with current limiting breakers <ul style="list-style-type: none"> ■ Specific current limiting breakers allows the switch to be operated in applications where higher withstand ratings are required*
No key security feature	Front panel security lock <ul style="list-style-type: none"> ■ Front panel access can be locked out, preventing unauthorized transfers, testing or adjustments via the digital display

*40-1000 amp transfer switches

itches, a leap from tradition.

POWERFUL SOFTWARE SOLUTIONS

Cummins Power Generation's easy-to-use Windows®-based software helps reduce your power system set-up, operation, and maintenance costs. PowerCommand software provides supervisory monitoring – from one location – for easy management of on-site and off-site power systems. It seamlessly interfaces with multiple PowerCommand networks to monitor locally or remotely, either via Local or Wide Area Networks (LAN/WAN), or through a local modem and telephone lines.



PowerCommand for Windows® – software will actually alert you to fault conditions before alarm and provide:

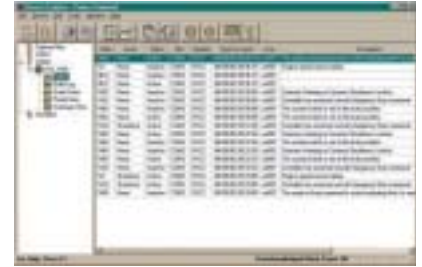
- Local or remote monitoring and control;
- Real-time data collection;
- Data retention, and;
- Report generation on the entire power system all from one location.



PowerCommand Pulse™ (or PC Pulse™) – software incorporates all the useful features of PowerCommand for Windows, with a more robust, OPC-driven graphical user interface for quick and easy monitoring of multiple power systems. Graphical screens display current alarms, historical alarm logs, and offer three levels of system security.

Additional PC Pulse options include:

- Alarm paging
- Auxiliary monitoring (currently only available via Ethernet connection)
- Data logging and historical trending (not available with PCPD models)



InPower – is a PC-service tool that allows both local and remote set-up, diagnostics. This means a technician can “talk” to a PowerCommand system anywhere, determine its status, and even make adjustments without being in the same facility. A Windows Explorer interface provides easy access to InPower's useful functions.

- **Strip charts:** Provide real-time recordings of changing conditions and performance.
- **Adjustments:** Users can easily change system operating parameters to fit the needs of a specific application.
- **Monitoring functions:** Allow real-time monitoring and data recording to simplify testing and diagnostics.
- **Report generation:** Automatically records test data and formats for quick test reporting.
- **Fault simulations:** Allow the user to simulate warning or shutdown conditions.

Automatic Tra



FOR CONTINUOUS OPERATION

PowerCommand Automatic Transfer Switches facilitate continuous operation and switching of electrical loads between the primary source and the standby generators. When the loss of normal power is detected, a start signal is sent to the genset and the load is automatically transferred. Once the main power source returns and stabilizes, power is automatically transferred back to the primary load. The resulting power transfer between sources to critical loads is safe, smart, and seamless.

STANDARD FEATURES:

- Ratings from 40 to 3,000 amps for 3-pole or 4-pole
- 3-phase sensing on utility and single phase emergency sensing
- Date and time stamp event recording
- Programmed transition – the most reliable way to transfer equipment loads
- Network compatibility for ease of operation and improved installation reliability
- Isolated voltage references protect control system from possible damage by voltage transients

OPTIONAL FEATURES:

- Front panel digital display – makes it easier to monitor conditions and program.
- Digital bar graph display provides at a glance system status.
- Load monitor with neutral sensing allows for consistent data collection.
- Two levels of control allow the designer to specify full-featured controls and monitoring based on the specific installation.
- Load shed removes the load from the emergency power source by driving the transfer switch to the neutral position when signaled remotely; transfers the load back to the emergency source when the signal contacts open; immediate re-transfer to the preferred source when it is re-established.
- Relay module provides an adjustable transfer, pending time delay of 0 to 60 seconds, and normal and emergency status signals, to prevent interruption of power during elevator operation. Relay outputs include: Source 1 connected and available, Source 2 connected and available, not in auto, test/exercise active, and pending transfer (elevator signal).

nsfer Switches

■ Override button

Bypasses time delays.

■ Long-life, high-visibility LED indicators

Designed to last the life of the control, these indicators include “not in auto” and “test/exercise active” monitoring.

■ Momentary push buttons

One touch allows for quick testing and retransfer of power.

■ Digital vacuum fluorescent displays

2 line x 20 character, for easy reading at a distance. Superior to LCD-type displays at extreme operating temperatures.

■ LED meter

Color-coded and easy to read bar graph provides system status information including 3-phase AC voltage, current, frequency, kW, and power factor.

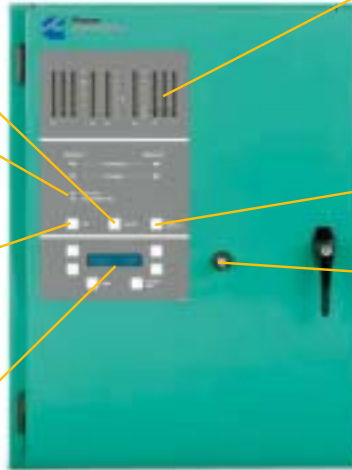
■ Lamp test button

■ Front panel security lock

Safeguards against unauthorized adjustments or operation.

■ PowerCommand networking capacity

Monitors the entire Cummins Power Generator power system.



■ Barriers over all live parts

Helps safeguard operators by preventing accidental contact.

■ PowerCommand control

Includes functions such as surge immunity and LED service indicators.

■ Easy access user interface

■ Continuous duty

■ Battery charger

For easy installation.

■ Spring-loaded overcenter mechanism

Provides automatic, fast, and consistent manual operation and reliable speed of transfer (ATS 40-1000 amps).

■ Linear motor operator

Provides simple direct motion, constant force, and smooth program transition without gears or links.

■ Permanently attached manual operator handles

For manual operation and easy servicing. (ATS rated 40-100 amps.)

■ Heavy-duty cabinet

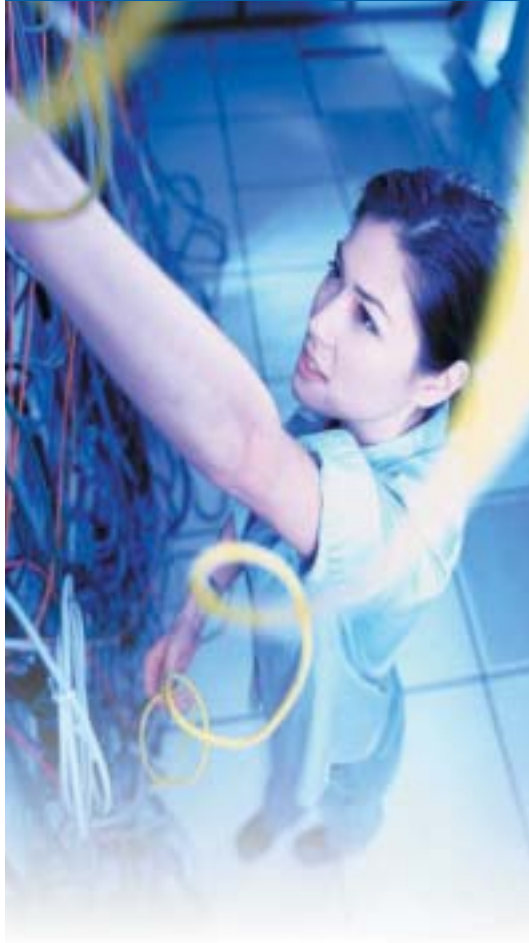
Constructed of 14-gauge welded steel.

■ InPower software and diagnostics

Allows for easy service.



Bypass Isolation



FOR CRITICAL NEED OPERATION

PowerCommand Bypass Isolation Transfer Switches are ideal for critical-need applications where any disruption to the supply of power, even for routine maintenance, is unacceptable. These transfer switches combine the features of our advanced automatic transfer switch with a drawout-isolation mechanism, a manual two-source bypass switch, and exclusive microprocessor-based controls. The resulting power transfer redundancy helps ensure constant, reliable power for critical applications.

STANDARD FEATURES:

- Ratings from 150 to 3,000 amps for 3-pole or 4-pole
- Exclusive non-load break design for smooth, non-disruptive manual bypass of the load to either source
- Programmed transition – the most reliable way to transfer equipment loads
- True closed-door drawout and isolation. All bypass, test, and isolation functions are performed with the door closed for operator safety
- Mechanically and electronically interlocked mechanism prevents both source to source connections and manual bypass to a dead source
- Date and time stamp event recording
- Front panel digital display – makes it easier to monitor conditions and program
- 3 phase sensing on utility and emergency sensing
- Network compatibility for easy operation and installation

OPTIONAL FEATURES:

- Configured for utility-to-utility applications.
- Digital load monitoring bar graph displays enable you to check system status at a glance.
- Load shed removes the load from the emergency power source by driving the transfer switch to the neutral position when signaled remotely; transfers the load back to the emergency source when the signal contacts open; immediate re-transfer to the preferred source when it is re-established.
- Relay module provides an adjustable transfer, pending time delay of 0 to 60 seconds, and normal and emergency status signals, to prevent interruption of power during elevator operation. Relay outputs include: Source 1 connected and available, Source 2 connected and available, not in auto, test/exercise active, and pending transfer (elevator signal).

Transfer Switches

■ Bypass to any source at any time

Normal or emergency power, whichever will keep you up and running.

■ Mechanical flags

Indicate bypass position.

■ Easy manual operation



■ Permanent-mounted instructions

■ Closed door three drawout positions

Connected, test and isolated.

■ Heavy-duty 3-point latches

■ Drawout automatic transfer switch

■ Cabinet space for "all top" or "all bottom" cable connect

■ Power contacts and arc chutes

■ Touch barrier over field connections

■ Position auxiliary contacts

■ Automatic safety shutters

Once the bypass is engaged, shutters drop into place to cover primary disconnects as the transfer switch is withdrawn.

■ Dead source electrical interlock

Prohibits closing to a dead source.

■ Stationary bypass switch

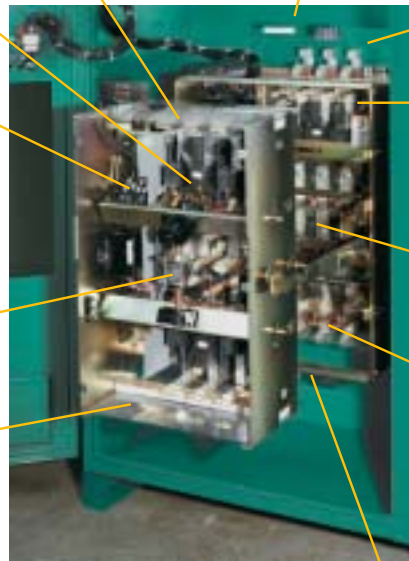
■ Linear motor actuator

■ Lexan shutter

Over drawout stabs for touch protection.

■ Clear Lexan® barriers

Allow viewing of contact position.



■ Allows manual transfer to either source at any time

■ Control disconnect plugs for fast and safer service

■ Mechanical "cross interlock" source interconnection

■ Convenient drawout rails

Once the automatic transfer switch is isolated, these enable it to be quickly rolled out and replaced.

Advantages for the real world.

POWERFUL NETWORKING OPTIONS

PowerCommand transfer switches feature a LonMark®-compliant network interface for smooth, simple integration into a local power system monitoring network or Building Automation System (BAS). Also featured is remote monitoring and control of all transfer switches and gensets from single or multiple locations, via a PC with PowerCommand Network.

NETWORK READY

- **Network with existing systems.** PowerCommand transfer switches can be networked and configured with existing systems and equipment running via a LonWorks® protocol.
- **Link to a single status display.** Set up one system status display – on-site or at a remote location – to conveniently monitor all gensets and transfer switches.
- **Integrate with existing building automation systems (BAS).** All PowerCommand equipment and systems can be integrated with popular BAS products from Intellution®, Johnson Controls®, Siemens-Landis® and Staefa®, Square D®, WonderWare® and others.

BENEFIT FROM THE POWERCOMMAND SYSTEM

Together as a system, PowerCommand transfer switches, digital paralleling systems, gensets and digital master controls provide benefits that pieced-together components can't match – enhanced performance and greater reliability. Couple that with the knowledge that the system has been designed, built and integrated by a single manufacturer, and you can be assured that you have selected a state-of-the-art power system. Cummins Power Generation also provides single-source warranty, planned maintenance, and round the clock emergency service 24 hours a day, seven days a week, including back-up rental power through our network of over 170 distributors in 110 countries around the world.

For more information about how Cummins Power Generation Transfer Switches can help you meet power demands, call your local Cummins Power Generation distributor at 1-800-888-6626.



single source warranty

planned
maintenance

worldwide
service
network



24/7 service



The Power of One™

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Bulletin F-1443