



PUTTING YOU IN CONTROL >>>

# Control & Power Systems Ltd

With 25 years experience in the design and manufacture of diesel generator control systems and low voltage distribution switchboards coupled with our extensive knowledge of the market place has enabled us to continually provide solutions to meet the demanding challenges of our customers. This allows our experienced sales and engineering staff to work closely with our customers from the initial enquiry right through to completion.

Our team of engineers is available to discuss any areas of the design prior to or during manufacture and is able to respond positively to any changes in specification.

During the years we have established an enviable reputation for the quality, reliability and service of our products.

We operate to an accredited ISO9001 standard with every aspect of design, purchasing and manufacturing being controlled and documented to ensure that every product is built to the highest standards. Every product that leaves the factory is subjected to a rigorous in house inspection and testing procedure that enables the customer to have the confidence in the reliability and finish of the equipment.

All products are designed and manufactured to comply with the latest BSEN and international standards

Our products are suitable for a range of climatic conditions from the cold of the Arctic to the heat and dust of the desert our products can give many years trouble free service.

Our wide experience has seen our products installed in a varied range of industries and blue chip organisations such as telecommunications, industrial, water industries, hotels/commercial, financial institutes, pharmaceutical & electrical distribution in all parts of the world.

We are able to offer our clients the option for start-up/commissioning services worldwide to ensure the customer can feel confident of a trouble free system, this is backed by our spare parts department to assist the client with any parts required.

*Control & Power Systems Ltd is a company dedicated to the design and manufacture of high quality diesel generator control panels and low voltage distribution switchboards and we have established our manufacturing facilities in a modern office and factory complex in Scarborough England.*



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# Product range

We are able to provide our customers with a range of standard or bespoke products comprising:

With every panel incorporating the latest microprocessor based modules to enable direct interface with modern engine management systems as standard.

Control systems can also be designed and built using (PLC) programmable logic controllers for schemes where a more complex switching or operation is required.

## On site services

- › Start-up/Commissioning of equipment
- › G59/10 protection testing
- › Primary/Secondary current injection testing



- › **DIESEL GENERATOR PANELS**
- › **MANUAL START**
- › **AUTOMATIC START**
- › **AUTOMATIC MAINS FAILURE**
- › **AUTOMATIC TRANSFER SWITCHING**
- › **AUTOMATIC AND MANUAL SYNCHRONISING**
- › **MAINS PARALLELING**
- › **LOW VOLTAGE SWITCHBOARDS**
- › **MOTOR CONTROL CENTRES**



## Automatic generator controls

The automatic start control panel design is based around intelligent microprocessor based controllers to provide advanced automatic control of diesel and gas generator sets, including both the standard and electronic engines. The panel design combines the latest technology for engine monitoring coupled with a sleek panel layout to give the operator easy functionality.

The panels are all manufactured from high-grade steel, which are pre-formed and welded prior to the application of a high-grade powder coated paint finish to withstand rigorous industrial conditions.

The automatic start panels are ideal for use on generator sets of all ratings and where comprehensive specifications with event logging, power measuring and communications need to be met.



### FEATURES

- › Wall/frame or floor standing arrangements
- › 12 or 24 volt DC operated
- › 220-254 / 380-440 volt AC
- › 50/60Hz
- › Automatic start
- › Manual start
- › PC configurable
- › Electronic engine compatible
- › RS 232/485 remote communications
- › Analogue inputs
- › Modbus RTU
- › Digital inputs
- › Engine event history log
- › Engine protection
- › Full engine diagnostics
- › LCD alarm indication
- › LED alarm indication
- › SMS messaging
- › LCD display screen back lit with 4 line text
- › Mains operated battery charger complete with ammeter indication
- › Emergency stop pushbutton twist to reset
- › Control circuits protected with miniature circuit breakers
- › External protection IP31 to IP55
- › Internal protection IP2X
- › 3 or 4 pole alternator protection circuit breaker

### COMMON APPLICATIONS

- › Prime power generators
- › Mobile generators
- › AMF installations

## Automatic paralleling

The automatic paralleling control panel design is based around intelligent microprocessor based controllers to provide advanced automatic paralleling and load sharing control of diesel and gas generator sets, including both the standard and electronic engines. The panel design combines the latest technology for engine monitoring coupled with a sleek panel layout to give the operator easy functionality and a powerful operating solution.

**We can offer a number of different solutions for paralleling situations including:**

- › Multiple diesel generators in parallel base load & standby
- › Multiple diesel generators in parallel with the utility
- › Multiple diesel generators in parallel with multiple utilities
- › Single diesel generators in parallel with utility

The panels are all manufactured from high-grade steel, which are pre-formed and welded prior to the application of a high-grade powder coated paint finish to withstand rigorous industrial conditions.

The automatic synchronising panels are ideal for use on generator sets of all ratings and where comprehensive load sharing specifications with event logging, power measuring and communications need to be met.



### FEATURES

- › Wall/frame or floor standing arrangements
- › 12 or 24 volt DC operated
- › 220-254 / 380-440 volt AC
- › 50/60Hz
- › Automatic & manual start
- › Automatic synchronising
- › Automatic start & stop control on load demand
- › Automatic load share
- › PC configurable
- › Electronic engine compatible
- › Multiple generator communications
- › RS 232/485 remote communications
- › Analogue inputs
- › Modbus RTU
- › Digital inputs
- › Engine event history log
- › Engine protection
- › Full engine diagnostics
- › LCD alarm indication
- › LED alarm indication
- › SMS messaging
- › LCD display screen back lit with 4 line text
- › Mains operated battery charger complete with ammeter indication
- › Emergency stop pushbutton twist to reset
- › Control circuits protected with miniature circuit breakers
- › External protection IP31 to IP55
- › Internal protection IP2X
- › 3 or 4 pole alternator protection/paralleling circuit breaker

### COMMON APPLICATIONS

- › Prime power generators
- › Mobile generators
- › AMF installations
- › Peak lopping/shaving installations

# Low voltage switchboards

Every low voltage distribution switchboard is designed and manufactured to meet the most arduous of conditions or client specifications. These can be offered with any "form of separation" as defined in BSEN 600439-1 and required by the client and environment.



Every Low voltage distribution switchboard is designed to ensure that the equipment and personnel are protected and that maintenance and component replacement can be carried out in a safe environment and without interruption of the site or control process.

Within every Low voltage distribution switchboard we incorporate the latest "state of the art" technology with only the highest-grade components being used from world-renowned suppliers such as **ABB Schneider** to give trouble free operation with low maintenance and operating costs

Low voltage distribution switchboards are all manufactured from high-grade steel, which are pre-formed and welded prior to the application of a high-grade powder coated paint finish to withstand rigorous industrial conditions.



## FEATURES

- BS EN 60439-1 compliant
- Certified busbars and earth bars for fault ratings:
  - 20 kA for 1 second
  - 50 kA for 1 second
  - 50 kA for 3 seconds
  - 80 kA for 1 second
- Wide range of control options including programmable logic controller (PLC) and BMS interfaces
- Compact assemblies
- Wide range of instrumentation and metering from individual analogue to multi function
- Future extension of the switchboard
- Source-changeover arrangements are available complete controller to ensure power-supply continuity
- Wide choice of devices including ACBs, MCCBs and fuse switches
- Comprehensive range of ancillary equipment including power factor correction

# Motor control centres

Every low voltage motor control centre (MCC) is designed and manufactured to meet the most arduous of conditions or client specifications. These can be offered with any "form of separation" as defined in BSEN 600439-1 and required by the client and environment.

These can range from the basic direct on line through to variable speed / soft starting configurations as required to meet the application.

Every MCC is designed to ensure that equipment and personnel are protected and that maintenance and component replacement can be carried out in a safe environment and without interruption of the site or control process.

Within every MCC we incorporate the latest "state of the art" technology with only the highest-grade components being used from world-renowned suppliers such as **ABB Schneider** to give trouble free operation with low maintenance and operating costs

Motor control centres are all manufactured from high-grade steel, which are pre-formed and welded prior to the application of a high-grade powder coated paint finish to withstand rigorous industrial conditions.



## FEATURES

- BS EN 60439-1 compliant
- Certified busbars and earth bars for fault ratings:
  - 20 kA for 1 second
  - 50 kA for 1 second
  - 50 kA for 3 seconds
  - 80 kA for 1 second
- Wide range of control options including programmable logic controller (PLC) and BMS interfaces
- Wide range of starting options:
  - Direct on line
  - Star / Delta
  - Variable speed
  - Soft start
- Wide range of instrumentation and metering from individual analogue to multi function
- Future extension of the MCC
- Comprehensive range of ancillary equipment including power factor correction

## Automatic transfer switch panels

The automatic transfer switch panel design is based around intelligent microprocessor based controller to provide advanced automatic monitoring of mains and generator supplies. The panel design combines the latest technology for control and switching of supplies coupled with a sleek panel layout to give the operator easy functionality.

The panels are all manufactured from high-grade steel, which are pre-formed and welded prior to the application of a high-grade powder coated paint finish to withstand rigorous industrial conditions.

Automatic transfer switch panels provide solutions where the transfer of critical loads to emergency sources is required.



### FEATURES

- › Wall/floor standing arrangements
- › 220-254/380-440 volt AC
- › 50/60Hz
- › 30 – 6000 amp rated
- › Conforms to BSEN/IEC 60947
- › Automatic or manual operation
- › Under & over voltage monitoring (3 phase) on normal source
- › Under & over voltage monitoring (1 phase) on emergency source
- › Under & over frequency monitoring of normal and emergency source
- › Phase sequence sensing
- › Adjustable time delays such as mains failure/return & delay on transfer
- › Emergency generator start/stop dry contact
- › Control circuits protected with miniature circuit breakers
- › External protection IP31 to IP55
- › Internal protection IP2X
- › 3 or 4 pole switching configurations
- › Numerous options are available including:
- › BSEN/IEC 60947-6-1 conformity
- › Software for remote monitoring via RS232/485
- › Bypass isolation switching
- › Metering

### COMMON APPLICATIONS

- › Hospitals
- › Commercial/industrial buildings
- › Offices

## Mains paralleling

The automatic mains paralleling control panel design is based around intelligent microprocessor based controllers to provide advanced automatic paralleling and load sharing control of either single or multiple diesel and gas generator sets with the mains (utility) source. The panel design combines the latest technology for engine monitoring and control coupled with a sleek panel layout to give the operator easy functionality and a powerful operating solution.

**We can offer a number of different solutions including:**

- › Multiple diesel generators in parallel with the utility
- › Multiple diesel generators in parallel with multiple utilities
- › Single diesel generator in parallel with utility
- › Short time (no break) or peak lopping with or without export capability

The panels are all manufactured from high-grade steel, which are pre-formed and welded prior to the application of a high-grade powder coated paint finish to withstand rigorous industrial conditions.

The automatic synchronising panels are ideal for use on generator sets of all ratings and where comprehensive load sharing specifications with event logging, power measuring and communications need to be met.



### FEATURES

- › Wall/frame or floor standing arrangements
- › 12 or 24 volt DC operated
- › 220-254 / 380-440 volt AC
- › 50/60Hz
- › Automatic & manual start
- › Automatic synchronising
- › Automatic start & stop control on load demand
- › Automatic load share
- › PC configurable
- › Electronic engine compatible
- › Multiple generator communications
- › RS 232/485 remote communications
- › Analogue inputs
- › Modbus RTU
- › Digital inputs
- › Engine event history log
- › Engine protection
- › Full engine diagnostics
- › LCD alarm indication
- › LED alarm indication
- › SMS messaging
- › LCD display screen back lit with 4 line text
- › Mains operated battery charger complete with ammeter indication
- › Emergency stop pushbutton twist to reset
- › Control circuits protected with miniature circuit breakers
- › External protection IP31 to IP55
- › Internal protection IP2X
- › 3 or 4 pole alternator and/or mains paralleling circuit breaker

### COMMON APPLICATIONS

- › Prime power generators
- › Mobile generators
- › AMF installations





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