

Mains Parallel Controller for Multiple Gensets

INTRODUCTION

The MC 200 controller is used where one or more mains supplies are required to parallel with the generator bus, it also features a powerful PLC to ensure site specific design details can be accommodated. A large full colour display presents operating status in a clear easy to view format. A generous input and output capability with the ability to add expansion where needed, which means complex sites can be tackled with ease.

The MC200 provides both mains monitoring and automatic transfer switch control functions (AMF). In addition it can be configured to provide both forward and back synchronizing with the mains supply and generating set bus, allowing a 'no-break' transfer in either direction.

While the generators are in parallel to mains, the MC200 monitors the incoming mains supply and should a failure be detected the mains circuit breaker will be opened to isolate the genset bus from the mains.

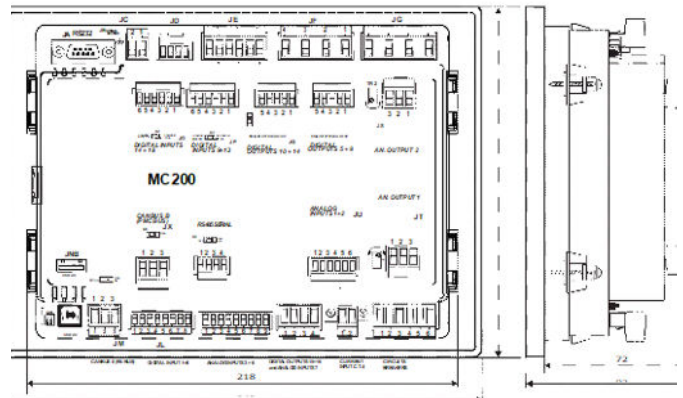
The MC200 provides control of both a Mains Circuit Breaker (MCB) and a Master Genset Circuit Breaker (MGCB).

The MC200 will synchronize all gensets (controlled by the GC400, GC600 or DST4602Evo parallel controllers) to the mains, with a soft transfer of the load from the gensets to the mains, thus avoiding any blackout on the load.

The embedded 'genset management' logics will allow selection of the number of running sets according to the load, and integrates perfectly with the same load management present in the genset parallel controllers.

The MC200 can be combined with parallel controllers. In addition, if the plant includes a tie breaker, it can be controlled by the BTB200 controller. Communication between devices is managed with a single CANBUS connection (PMCBus).

The MC200 can also be used in a 'standalone' mode as a synchronizer and load sharer across a specific breaker controlling a third party genset.



MAIN FEATURES

- Start/stop commands for the generators via the PMCBus
- An internal synchronizer with voltage, frequency and phase differences control
- Management of active power setpoints for the generators, to allow the gradual transfer of the load
- Management of power factor setpoints for the generators, when operating in parallel with the mains
- Fixed power control when in parallel to mains (BASE LOAD), with the power setpoint for the generators adjustable by parameter or by analogue input
- Variable power control when in parallel to mains (IMPORT EXPORT, or variable kW on the generators to guarantee a fixed power on the mains), with power setpoint for the mains adjustable by parameter or by analogue input.
- The loss of mains protections, to isolate the generators from the mains in case of failure of the mains itself
- The LOAD SHEDDING function (non-priority load disconnection), with 4 available levels
- The PEAK SHAVING and PEAK LOPPING functions (start of generators due to excessive demand of the load from the mains)
- Using the internal calendar clock (with rechargeable backup battery):
 - Periodical genset's start-up with programmable rate (this test can be done without load, in parallel to the mains or in island mode by transferring the loads from the mains to the generators)
 - Selectable days and time intervals in which the generators must never be started
 - Selectable days and time intervals in which the generators must be started even if the mains is present
 - Periodical and 'on-event' history logs
- Embedded alarm sounder
- Multilanguage display (EN, IT, FR, PT, ES, RU)

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EMBEDDED FUNCTIONS

The MC200 offers true RMS measures for:

- Mains voltages
- Genset bus bars voltages
- Circulating currents
- Active, reactive, apparent power and power factor on the mains (total and by phase)
- Active, reactive, apparent power and power factor on gensets bus bars (total)

The MC200 is equipped with inputs and outputs, both digital and analogue, all freely configurable, to meet the specific needs of the application.

Thanks to the configurable AND/OR 'Logics', and a large and powerful built-in PLC it is possible to configure specific operating sequences for each type of application.

The controller is equipped with a large 4.3" colour graphic display, with icons and symbols, for a quick review of measurements (mains and gensets) and system status. It also allows the manual opening and closing of both the mains circuit breaker (MCB) and the master genset circuit breaker (MGCB), via two dedicated buttons.

COMMUNICATIONS

- USB port (Modbus RTU)
- RS232 serial port (Modbus RTU) - it supports an external GSM/GPRS modem
- Isolated RS485 serial port (Modbus RTU)
- Ethernet port with RJ45 connector (Modbus TCP)
- Insulated CANBUS interface for the connection of the expansion modules (EXBUS)
- Insulated CANBUS interface for the connection of the other Mecc Alte (PMCBUS)

Options

- REWIND - GPRS/GSM/GPS device (for SIMONE)

TECHNICAL DATA

- Supply voltage 8-32V DC
- Power consumption typically less than 6W (standby, controller switched on, LCD lamp switched off)
- Operating frequency 50Hz or 60Hz
- 4.3" TFT colour display with backlight
- Graphic display resolution 480 x 272 pixel
- Graphic display dimensions visible surface 95 x 54 mm
- Recommended operating temperature: -30°C to +70°C
- Storage temperature -30°C to +80°C
- Protection degree IP65 (only with gasket correctly installed)
- Weight 1100grammes
- Overall dimension 244 (W) x 178 (H) x 83 (D)
- Panel cut-out 218 (L) x 159 mm (H)
- EMC conforms to EN61326-1
- Safety built in conformity to EN61010-1



Mecc Alte Kit
Bundle Option



Lower Costs
Smart Logistics



User Friendly
Intuitive

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The information contained in this document is substantially correct at the time of publication but may be subject to change. Please work with your Mecc Alte contact to confirm details.



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POWER FROM WITHIN