

ACP – AUTOMATIC CONTROL PANELS

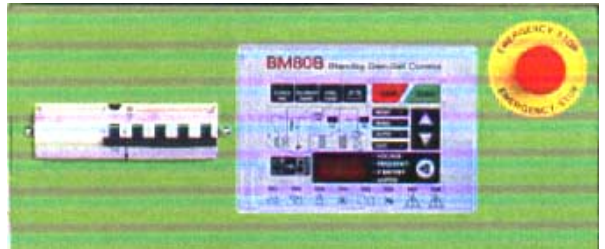
The generating set is supplied with an automatic control panel, mounted on the genset. The panel includes an automatic control unit that starts the genset in case of mains failure (it can be started manually too), main circuit breaker (three poles standard, four poles optional depending of the model), differential protection and all auxiliary controls and alarms. Power cables between generator and circuit breaker are included. All controls are wired to a plinth row installed in the control panel for an easy external Load Transfer Switch (LTS) panel connection (this panel is optional). There are two different ACP panels available. The BM80 used on the GB series and GS series with Lombardini and the GC-M02 used on the GS series gensets.

BM80

Three phase and (single phase) 50 Hz panel for measurement, control and protection of the genset.

The panel is supplied mounted on the base frame (open set) or on the canopy (soundproof). It is fitted with:

BM-80B (12V both automatic and manual mode) control unit, which includes following functions and components:
Measure and visualisation of the following parameters (instant values) by means of a digital display and LED indicators:



Digital display:

- Mains & generator one phase voltage
- Generator one phase amperage
- Battery voltage
- Generator frequency
- Working hours

LED Indicators:

- Engine running
- Start failure
- Low oil pressure
- High engine temperature (only for Deutz)
- Low battery voltage
- Genset contactor ON
- Mains contactor ON

Warnings and shutdowns:

- Low oil pressure shut down
- High engine temp shut down (only for Deutz)
- Battery charging failure warning
- Over and under frequency shut down
- Alternator failure shut down
- Over load
- External STOP shut down
- Over and under voltage shut down

- Frontal four positions push button for: TEST - AUTO - MANU - RESET positions.
- ON / OFF selector switch
- Emergency stop button.

Other features:

- Overload protection (current) in the control unit
- Static battery charger in the control unit
- 3 phase detector in the control unit
- Fail to start protection
- 4 poles circuit breaker with differential protection
- Terminal board LTS panel connection
- One output 3 phase CE (only for Deutz).

GC-M02

Three phase and (single phase) 50 Hz panel for measurement, control and protection of the genset.

The panel is supplied mounted on the base frame (open set) or on the canopy (soundproof). It is fitted with:

AEZ **GC-M02** (12V up to and 165 kVA / 24 V above 165 kVA, both automatic and manual mode control unit, which includes following functions and components: Measure and visualisation of the following parameters (instant values) by means of a digital display and LED indicators:



Digital display:

- Mains & generator voltage
- Generator three phases amperage
- Battery voltage and charging current
- Generator frequency
- Power (kVA, kW, kVar & cos.phi)
- R.P.M.
- Fuel level
- Oil pressure (standard for 1015 Deutz and Volvo)
- Engine temperature (opt. for air-cooled engines)
- Running hours, hours till maintenance
- Starting attempts
- Status and alarm description

LED Indicators:

- Mains available
- Mains contactor ON
- Genset contactor ON
- Generator running
- General alarms
- Battery charger ON
- Battery ON
- Micro-controller processing
- Fuel pump filling
- Engine started
- Engine stopping

Warnings and shutdowns:

- Oil pressure warning and shut down
- Temperature warning and shut down
- Battery warning and shut down
- Fail to start shut down
- External STOP shutdown
- Over and under speed shut down
- Over and under frequency shut down
- Low fuel level warning
- Over load kVA shut down
- Over current and short circuit shut down
- Over and under voltage shut down
- Alternator failure shut down
- Auxiliary input shut down
- Mains or generator contactor anomaly warnings
- Low cooling water level shut down (depending on genset model)

- Frontal six positions selector switch for: TEST - AUTO - LOCKED - MAINS CONTACTOR ON - MANUAL - GENSET CONTACTOR ON.
- ON / OFF selector switch
- Emergency stop button.

Other features:

- Overload protection (current) in the control unit
- Pre-arrangement for pre-heating plugs
- Fuel transfer pump control
- Exerciser (timer for maintenance start)
- Static battery charger in the control unit
- 3-phase detector in the control unit
- LED test
- Blocking by external signal
- Forced start by external signal
- 50 Hz main circuit breaker with differential protection 4 poles (up to 63A) / 3 poles (over 100A). For 60 Hz available with circuit breaker (IV) or without circuit breaker.
- Terminal board connector for LTS panel as standard. Plinth row connection optional.
- On 50 Hz version only, one output schuko socket 220 V, with circuit breaker and differential protection.