Project – Parallel operation of 5x600 KVA Kirloskar DG set by DEIF AGC 242   Power Management Controller A/c MCA Stadium, Pune.

Project   : MCA Cricket Stadium,Pune.
Customer : AK Engineering, Mumbai.

5x600 KVA Kirloskar DG set supplied by Goel Power Mumbai.

Engine [Make –Kirloskar]

Engine make & Model   : Kirloskar & DV-12.

Alternator [Trident Power]

Alternator Make   : Trident Power.

Alternator Model   : KG 384 L1

Auto/Manual Synchronization Panel Supplied by AK Engineering-Mumbai.

DEIF AGC 242 for Auto Start + Auto Synchronizing + Auto Load Sharing + Power Management controller for 5x600 KVA Kirloskar Gensets.

Engine control Panel -

Engine controller. AGC 242 will give start input to engine controller for starting the DG
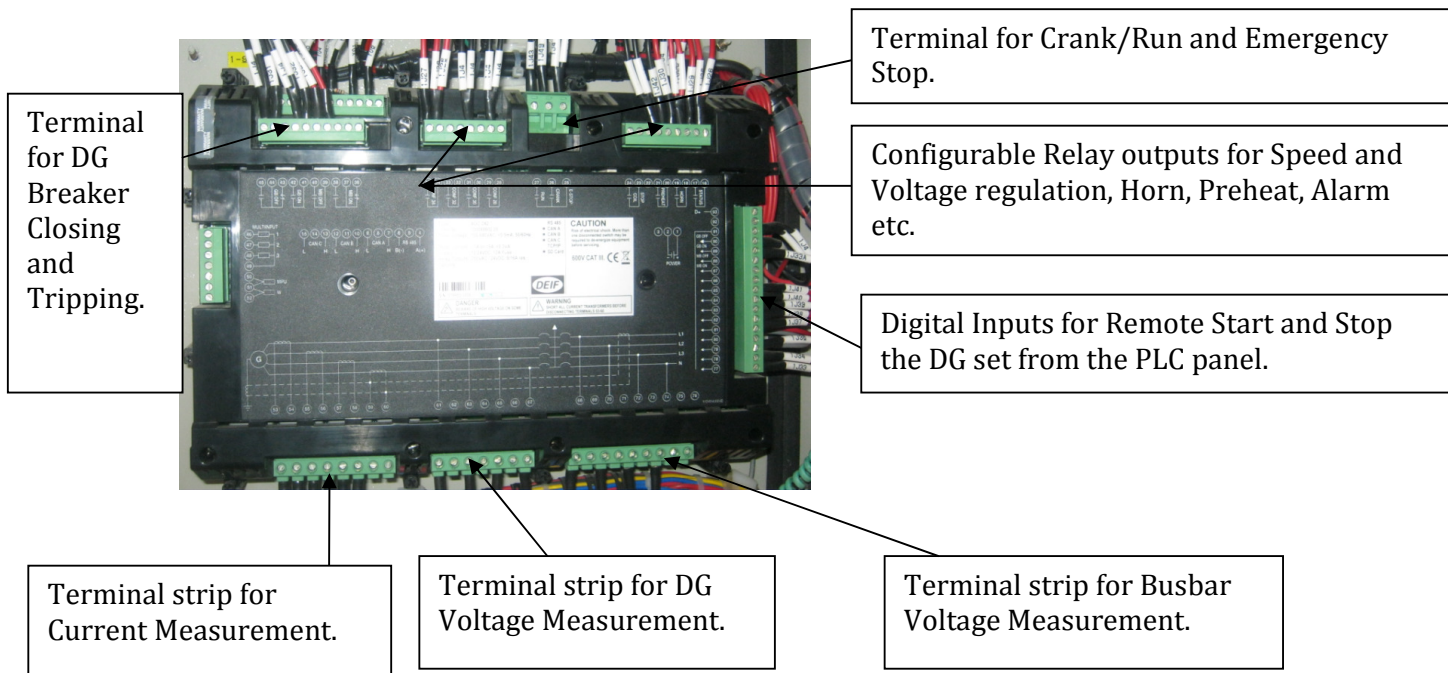
AGC 242 Front Folios -

DEIF AGC 242 is used for:

➤ Auto/Manual Starting of DG set in case of Gird Power Failure.
➤ Synchronization and Equal Load Sharing.
➤ Power Management Operation.
➤ Generator Protections.

AGC 242 Terminal Overview –

Terminal for Crank/Run and Emergency Stop.

Configurable Relay outputs for Speed and Voltage regulation, Horn, Preheat, Alarm etc.

Digital Inputs for Remote Start and Stop the DG set from the PLC panel.

Terminal for DG Breaker Closing and Tripping.

Terminal strip for Current Measurement.

Terminal strip for DG Voltage Measurement.

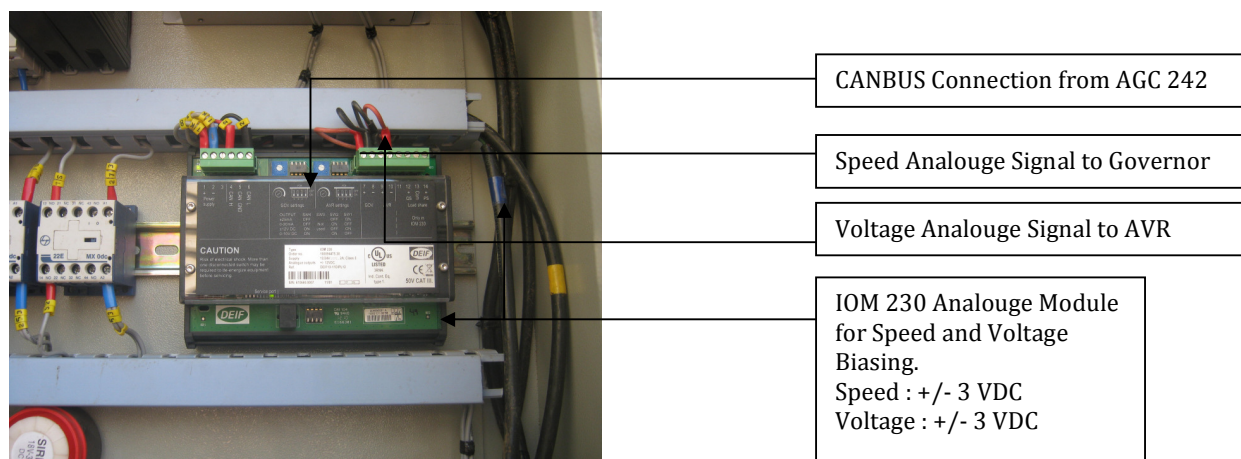Terminal strip for Busbar Voltage Measurement.

Crank Relay Coil : Not Used.

Run Relay Coil : Connected to Kirloskar Engine controller as a continuous input to run the DG set.

Configurable Output Relays : Connected to DEC 5 Kohler DG set for digital Speed Governing and voltage regulation.

Digital Input : Connected to AGC 242 for Auto Start/Stop incase Grid Power failure.
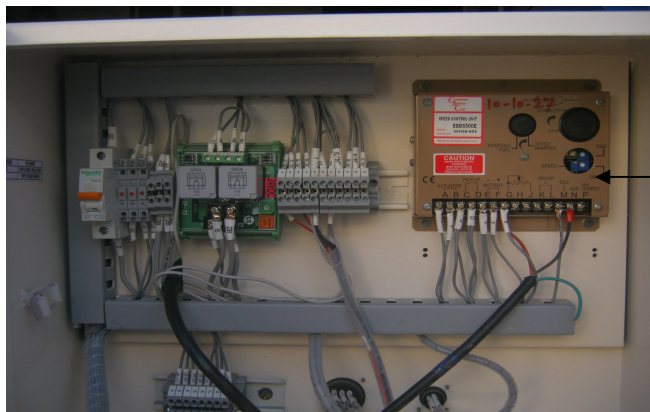
IOM 230 Analogue module for Speed and Voltage biasing -

CANBUS Connection from AGC 242

Speed Analouge Signal to Governor

Voltage Analouge Signal to AVR

IOM 230 Analouge Module for Speed and Voltage Biasing.
Speed : +/- 3 VDC
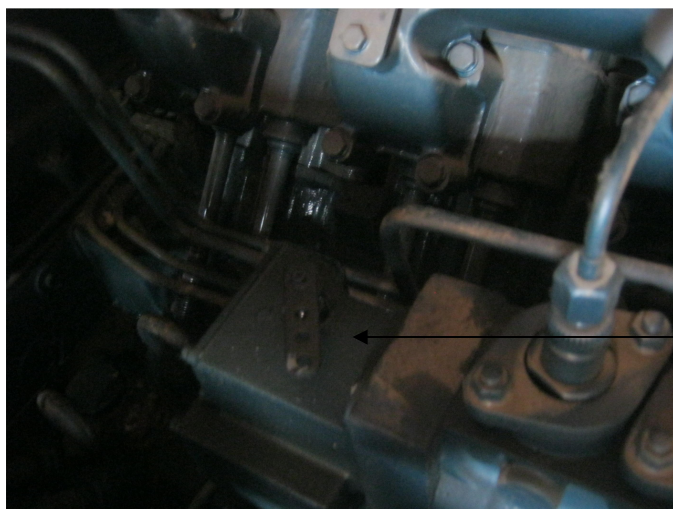Voltage : +/- 3 VDC

Speed Governor Module:

Engine Speed Governor Model: GAC.

Analouge output from AGC 242 connected to GAC Governing card for Speed Regulation.

Engine Speed Governor -

Location of Engine Speed Governor.

Plant Operational Logic:

There are two events day –

1. Non Event Day [No Cricket Match]
2. Event Day [Cricket Match]

In Non Event Day, the panel will be in Auto Mode. Incase of Power failure, DG set will start and as per available load all the DG set will work.

In Event Day, the panel will be in Semi-Auto mode and the operator will be the incharge of the plant.