



EPM-40 ENGINE PROTECTION MODULE

DESCRIPTION

The ALLIEDTECHNO model EPM-40 is a microprocessor controlled unit designed to start and stop the genset manually using the key switch on the front panel.

In the *OFF* position, the DC supply is removed from the module, thus zero power consumption is achieved.

The unit powers up when the *ON* position of the front panel is selected. This will also energize the fuel solenoid relay and Fuel Light active. The engine is started using the next spring-loaded position marked *START*. Once the engine has started, the switch should be released.

CPU Light blinking insure that module is in good condition.

To shut down the engine, select the *OFF* position on the switch.

When the engine is running, the unit monitors fault conditions and shuts-down the engine automatically in the occurrence of an alarm. The alarms are identified by a group of LEDs displaying only the first occurring one. The alarm checking is only enabled after the *protection hold-off timer* is expired. This timer is set to 45 seconds when the unit is powered up, it resets to 20 seconds if the engine gets running.

The occurrence of below fault conditions will cause the engine to be stopped immediately:

- 1- Over speed
- 2- Hot water temperature
- 3- Hot oil temperature
- 4- Low oil level
- 5- Low oil pressure
- 6- Low gas pressure

If a fault condition occurs, the *FUEL* solenoid will be deenergized and the led associated with this condition will turn on.

Only the first occurring fault will be indicated. To reset the fault condition, turn the switch to the *OFF* position for a few seconds.



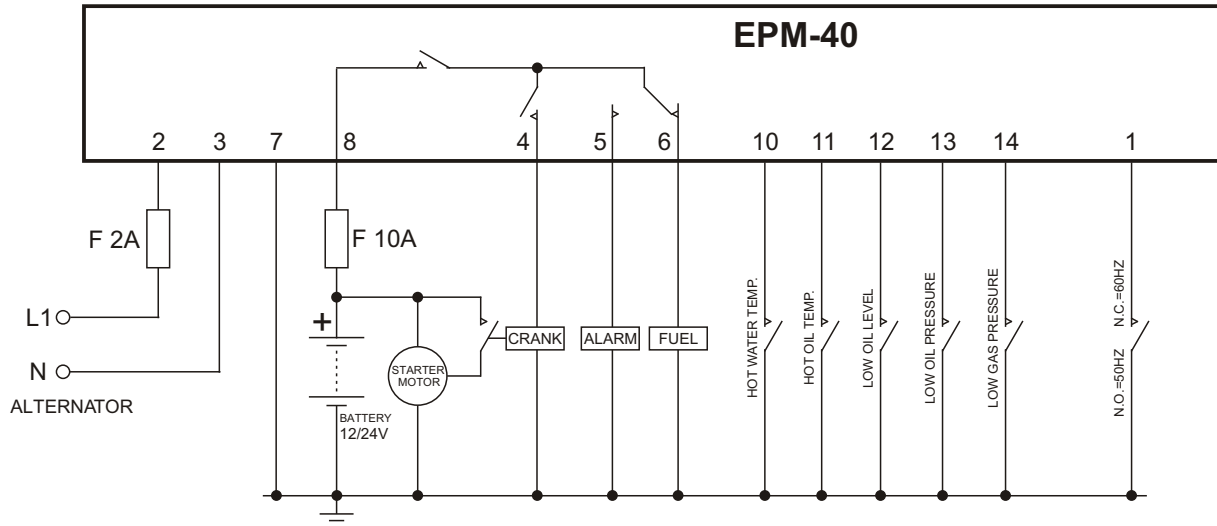
The limits for the correct generator frequency are 30 to 57 Hz for 50Hz operation and 30 to 68Hz for 60Hz operation.

The unit uses high current part connectors for maximum power transfer and safety from wire losing.

FEATURES

- Microprocessor controlled**
- Manual fuel control and start**
- Automatic shutdown on fault condition**
- Survives cranking dropouts**
- Digital LED Bar of generator frequency**
- Over speed protection**
- Hot water temperature protection**
- Hot oil temperature protection**
- Low oil level protection**
- Low oil pressure protection**
- Low gas pressure protection**
- Alarm output**
- High power connectors**
- Standard panel dimensions (96x96mm)**
- Low cost ,high efficient**
- Low failure rate**

TYPICAL CONNECTION DIAGRAM



INPUTS

BATTERY SUPPLY: 12 or 24 volts DC, (+) and (-) terminals.

L1: Generator phase voltage.

NEUTRAL: Generator neutral terminal.

HIGH TEMP. SWITCH: Negative closing input.

HOT WATER TEMP.: Negative closing input.

LOW OIL LEVEL: Negative closing input.

LOW GAS PRESSURE: Negative closing input.

60HZ OPERATION: Negative closing input.

OUTPUTS

FUEL SOLENOID : 5 amps@28V-DC.

START : 12 amps@28V-DC.

ALARM : 5 amps@28V-DC.

OPTIONS

JUMPER SELECTABLE STANDARD

FEATURES:

Genset control:

50Hz Normal

60Hz Jumper Select (Pin1 must be GND for 60 Hz Operation)

TECHNICAL SPECIFICATIONS

Alternator Voltage: 100 to 275 V-AC

Alternator Frequency: 50 or 60 Hz nominal.

Overspeed: Nominal frequency + 14% (+24% overshoot)

Underspeed: 30 Hz

DC Supply Range: 8 to 30 VDC.

Current consumption: 150mA max. (Relay outputs open).

Operating temp.: 20°C to 65°C.

Storage temp.: 10°C to 80°C.

Maximum humidity: 80% non-condensing.

Dimensions: 96 x 96 x 60 mm (W x H x D)

Panel cutout dimensions: 92 x 92 mm

Weight: 350g (approx.)

Installation: Front panel mounted, auto Lock.

ALLIED TECHNO CONTROL SYSTEMS

JHUMRA ROAD, MANSOORABD,
FAISALABAD, PAKISTAN-38060.
TEL:+92-41-8723274 MOB:+92-321-6622966
FAX: +92-41-8720598