

GPM-2 is a programmable motor protector, designed to control and monitor generators, motors, compressors and motorised pumps, etc. It can be used with either 12 or 24V DC batteries.

1. OPERATION


GPM-2 has two operating modes, which can be selected by turning the switch to either MANUAL or AUTOMATIC.

Pressing the start button will send the corresponding command to the motor. Ignition will be deactivated when the “LOW OIL PRESSURE” or “BATTERY CHARGE ALTERNATOR” pilot lights go off or the frequency exceeds **20 Hz**.



When the switch is turned to “MAN”, the “LOW OIL PRESSURE” and “BATTERY CHARGE ALTERNATOR” pilot lights will come on. If the start button has not been pressed after an interval of 60 seconds, the **GPM-2** will stop the process and activate a siren for 120 seconds.

When the switch is turned to “AUTO” and terminals 1 and 2 are both closed, the “LOW OIL PRESSURE” and “BATTERY CHARGE ALTERNATOR” pilot lights will come on. Automatic operation is enabled and the corresponding LED pilot light (AUTO TEST) is lit. The device will permit 3 ignition attempts. If the group does not start after the third attempt, the “START UP FAILURE” alarm will be triggered. When terminals 1 and 2 are opened, the system times an off-load running period and then commands the motor to stop. **GPM-2** then disconnects from the battery and is available for a new service.

2. SIGNALS

- **AUTO TEST:** Constant green/Remote operation
- **PRE-IGNITION:** Constant yellow/Pre-ignition
- **STOP:** Red
 - Flashing LED:** Off-load running for 60 sec., after which **GPM-2** stops the motor.
 - Constant LED:** Stop command, 20 sec.
- MAINTENANCE:** Flashing yellow
 - 1st maintenance:** After 50 operating hours
 - 2nd maintenance:** 150 operating hours after the first maintenance (**programmable**)
 - RESET MAINTENANCE:** Turn the switch to “STOP” and press  during stop time.

3. ALARMS

- **START UP FAILURE** 
 - Flashing LED:** After three failed attempts, the **siren** is activated and the **GPM-2** sends a **stop command**.
 - Constant LED:** “Low voltage or frequency alarm”, the **siren** is activated. The **GPM-2** sends a **stop command**.
- **BATTERY CHARGE FAILURE (BELTS BROKEN)** (Timed: 20 sec.) 
 - Constant LED:** Motor stopped (before start up), **signal only**.
 - Flashing LED:** “Battery charge failure alarm”: the **siren** is activated and the **GPM-2** sends a **stop command**.

LOW OIL PRESSURE (Timed: 20 sec.)



Constant LED: Motor stopped (before start up), **signal only.**

Flashing LED: “Low oil pressure alarm”: the **siren** is activated and the **GPM-2 sends a stop command.**

EXCESS TEMPERATURE / LOW WATER LEVEL



Constant LED: “Low water level alarm”: the **siren** is activated and the **GPM-2 sends a stop command.**

Flashing LED: “High water temp. alarm”: the **siren** is activated and the **GPM-2 sends a stop command.**

- **OVERLOAD**



Flashing LED: “Overload alarm”: the **siren** is activated and, after the programmed off-load running time, the **GPM-2 sends a stop command.**

- **LOW FUEL LEVEL**



Constant LED: “Low fuel level alarm”: the **siren** is activated.

Flashing LED: “Low fuel level alarm”: the **siren** is activated and the **GPM-2 sends a stop command.**

- **EMERGENCY STOP / EXCESS SPEED**



Flashing LED: “Emergency stop alarm”: the **siren** is activated and the **GPM-2 sends a stop command.**

Constant LED: “Excess speed alarm”: the **siren** is activated and the **GPM-2 sends a stop command.**

- **OPTIONAL ALARM**



Constant LED: “..... Alarm”: the **siren** is activated.

Flashing LED: “..... Alarm”: the **siren** is activated and the **GPM-2 sends a stop command.**

4. TECHNICAL DATA

POWER SUPPLY

12 and 24 V_{DC} nominal: (max. 17.5 V_{DC} and 35 V_{DC}, respectively). Can be selected using “**JUMPER J4**”.

ALTERNATOR PRIMING: Priming at 12V DC. Priming at 24V DC. No priming. Can be selected using “**JUMPER J2**”.

IGNITION DISABLE: Due to “OIL PRESSURE METER”, “BATTERY CHARGE ALTERN. SIGNAL ” or “Frequency” >20 Hz.

- **OUTPUTS**

Contact, Start up and Stop: + V DC (Battery positive), 10 Amp. maximum.

Alarm (Siren): - V DC (Battery negative), 1 Amp. maximum.

- **STANDARD TIMING**

Duration of alarms in order to be noted:	1 sec.
Delay of differed alarms:	20 sec.
Duration of pre-ignition:	10 sec.
Automatic Start up / Pause command:	10 sec.
Duration of stop command:	20 sec.
Duration of siren output:	2 min.
Off-load running:	1 min.

STANDARD CONFIGURATION

Battery voltage:	24V DC
Alternator priming:	YES
Start up / pause attempts:	3
Start up disable: L. Oil, Bat. Char. Alt. or Fr. > 20 Hz	
Generator frequency:	50 Hz
Low frequency alarm delay:	30 sec.
Duration excess speed:	1/2 sec
Gen. connection delay :	10 sec



BEWARE! SINCE THE BATTERY CHARGER GENERATORS, IF DISCONNECTED FROM THE BATTERY WHEN THE UNIT IS RUNNING, GENERATE BETWEEN 50 AND 200 VOLTS (DESTROYS ELECTRONICS), IT IS ABSOLUTELY ESSENTIAL NOT TO WORK ON THE CONNECTIONS WHEN THE UNIT IS RUNNING.

CONNECTION DIAGRAM

