

Functional Range

eGUARD V2 - Engine Guard



Engine Guard Type eGuard

The **Engine Guard** type **eGuard V2** protects the engine under fault conditions like high coolant temperature, low lubricating oil pressure, over-speed, under-speed etc by automatically stopping the engine or by preventing the start operation if such conditions are noticed before start.

1. Measurement

It measures engine RPM, lubricating oil pressure from a pressure gage, radiator water temperature from temperature gage and fuel level from a fuel gage.

2. Display

It displays engine RPM on a 4 digit 7segment bright display. It also displays cooling water temperature, fuel level and lubricating oil pressure on THREE bar graphs made up of bright LEDs.

3. Annunciation Lamps

There are NINE LEDs for annunciation. Every lamp represents a status. These lamps are marked RUN, CHG [Battery Charger Failure], LOP [Low Lubricating Oil Pressure], High Water Temperature [HWT], LFL [Low Fuel Level], EXT [Ext Stop] SPEEDHI, SPEEDLO and R-STOP [Remote Stop].

The LEDs stay ON after a fault until switch is turned to OFF position except in the case of LOP and RSTOP which turn OFF whenever fault disappears.

4. Operation

The start switch of the engine is connected to **eGuard**. The RUN position of the switch is connected to RUN input terminal and START position is connected to CRI [CRank Input] terminal. [Refer to wiring diagram].

When switch is turned from OFF position to RUN position, eGuard V2 functions are activated. Cranking starts when switch is turned to START position subject to the condition that all monitored parameters are normal. If any parameter is abnormal before starting, cranking is not allowed.

Cranking automatically stops as soon as generator voltage crosses ignition level or lubricating oil pressure is ok. Cranking also stops if switch is turned from START to RUN position.

5. Safety of the Engine

Engine is stopped when at least one of the following conditions is met.

1. Switch is turned to OFF position.
2. Any of the following faults occur: High Water Temperature, LOP, LFL, SPEEDHI and SPEEDLO.
3. External Stop input is activated.
4. Remote Stop is activated.

If engine stops due to LOP, HWT or LFL, the corresponding LED bars freeze. Bars become active again when switch is turned to OFF position and then back to RUN provided the said faults have reset.

6. Inputs Activation

Following inputs are activated by connecting their respective terminals to Battery negative terminal : E-STOP, LOP, High Water Coolant Temperature and R-STOP.

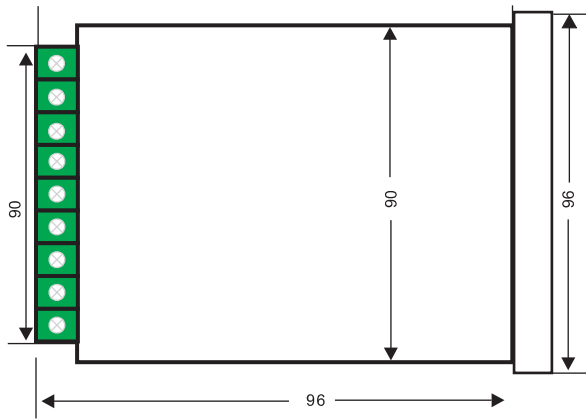
7. Terminal Description

Terminal No	Tag	Description
1	Ph	DG Phase
2	N	DG Neutral
3	RUN	RUN
4	EXT	External Stop
5	LFL	Low Fuel Level
6	R-Stop	Remote Stop Input
7	HWT	High Water Temperature
8	LOP	Low Lub Oil Pressure
9	B +	Battery +ve
10	CRO	Crank Out
11	IND/CHG	Induction / Charging
12	NC	No Connection
13	CRI	Crank In
14	B -	Battery -ve
15	WTG	Water Temp Gage
16	STP	Stop
17	OPG	Oil Pressure Gage
18	FLG	Fuel Level Gage

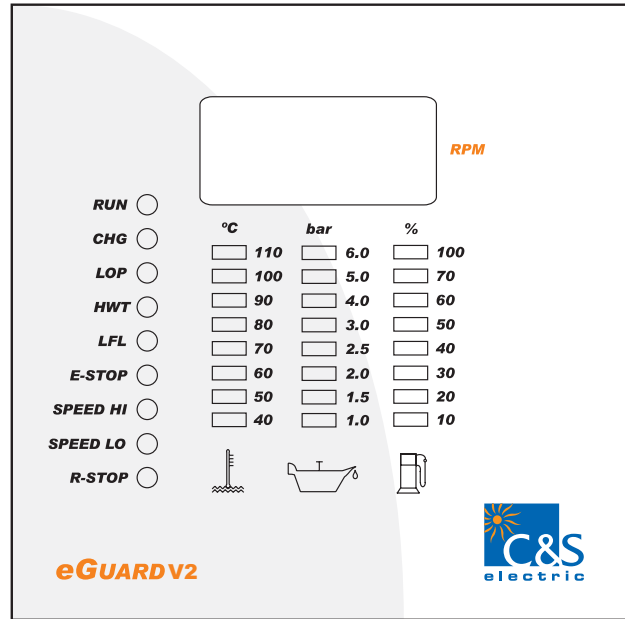
8. Mechanical Design

<input type="checkbox"/>	9 B+	FLG 18	<input type="checkbox"/>
<input type="checkbox"/>	8 LOP	OPG 17	<input type="checkbox"/>
<input type="checkbox"/>	7 HWT	STP 16	<input type="checkbox"/>
<input type="checkbox"/>	6 RSTOP	WTG 15	<input type="checkbox"/>
<input type="checkbox"/>	5 LFL	B- 14	<input type="checkbox"/>
<input type="checkbox"/>	4 EXT	CRI 13	<input type="checkbox"/>
<input type="checkbox"/>	3 RUN	NC 12	<input type="checkbox"/>
<input type="checkbox"/>	2 N	IND/CHG 11	<input type="checkbox"/>
<input type="checkbox"/>	1 Ph	CRO 10	<input type="checkbox"/>

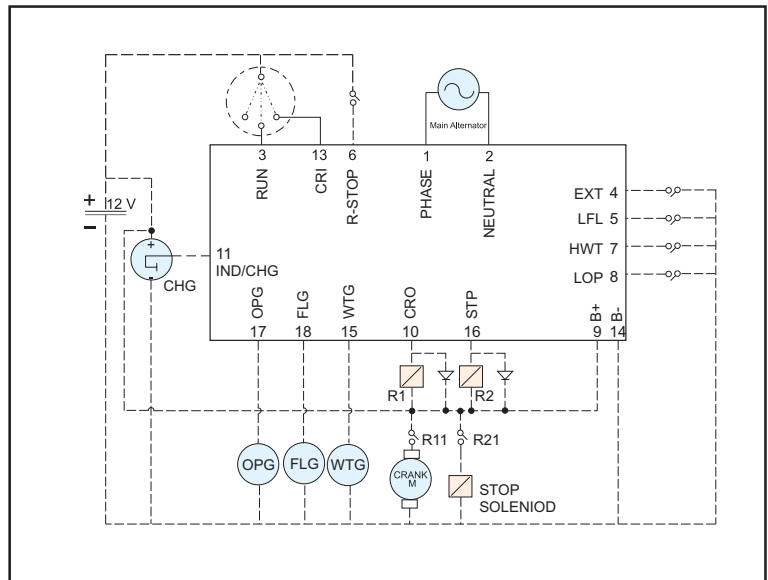
Terminal Description



All dimensions are in mm



9. Connection Diagram



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