




M140P

Mechanical Engine Monitoring Series







Key Features:

Diagnostics and Troubleshooting:

-  On-screen fault indicators and audible buzzer
-  Alarm event log and review screen with timestamped records
-  I/O Status screen to provide real-time input / output visibility for ease of troubleshooting

Safety Features:

-  High Temp Shutdown Switch input
-  Low Oil Pressure Shutdown Switch input
-  External Safety Switch Shutdown
-  Two Auxiliary Shutdown inputs

Control and Configuration:

-  Keyswitch Start / Stop Control
-  Configurable Preheat and Afterglow
-  Setable Engine Hours
-  Maintenance Timer with settable Intervals

Overview

The M140P is a rugged controller built for mechanical diesel engines used in industrial off-road applications. Designed for OEM applications or to replace aging analog gauge panels, the M140P blends simplicity with modern features like diagnostic logging and an easy to read full-color graphical display. Giving mechanically governed engines features normally reserved for digitally controlled engines.

Its compact enclosure, wide operating voltage range, and clear labelling make installation fast and intuitive. Whether you're running a pump, generator, or custom OEM setup, the M140P provides start/stop logic, alarm protection, and visual operator feedback.

Display and User Interface



Full Color 3.5" LCD screen



Selectable Screen Layouts: Single or Quad Data Display Modes



Customizable Data Units



Adjustable Screen Backlight

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Display

The 3.5" Graphical LCD Display provides an easy to read numerical notation in either single or quad parameter display.



Single Display



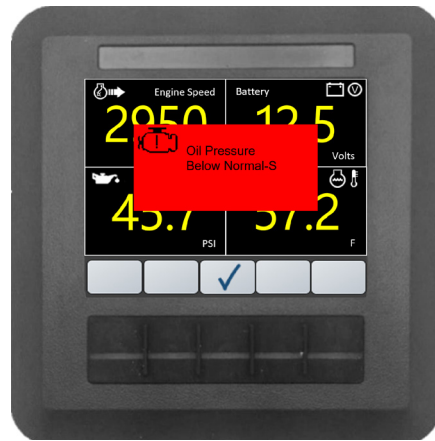
Quad Display

Engine Alarms and Logging

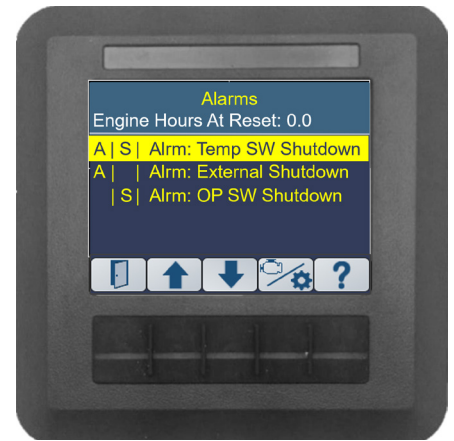
The M140P includes dedicated alarm inputs triggered by switch-style sensors (e.g. pressure or temperature).

These alarms are fully configurable in the I/O Settings menu to match your application.

When triggered, a pop-up alert appears in the center of the screen and stays visible until the user presses Acknowledge. Each alarm event is timestamped based on engine hours and logged automatically and can be reviewed at any time by pressing the Alarms button on the home screen.



Alarm Alert



Alarm Log

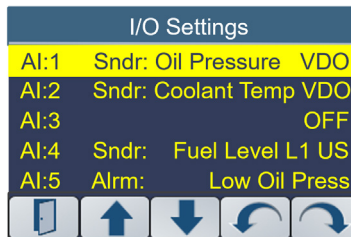
Maintenance Timer

The M140P includes a configurable maintenance timer that tracks engine run hours and provides on-screen alerts when service is due. Users can set custom intervals for maintenance reminders based on their engine's service schedule.



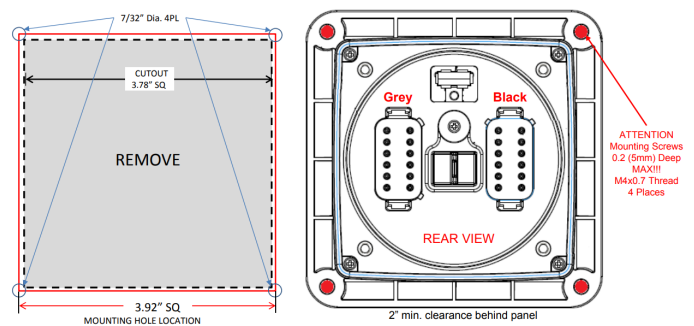
Configurable I/O

The M140P includes user-configurable inputs and outputs, all managed through the I/O Settings menu. Each input can be assigned to a specific sender type, such as oil pressure or coolant temperature and the data will be scaled and shown correctly on the main display.



Fitting template

NOT TO SCALE



Optional Auto-start Module

For pump and remote engine applications, the M140P supports an optional Auto-Start Module that integrates directly into the controller's harness. This add-on enables automatic engine start/stop based on float switch inputs.

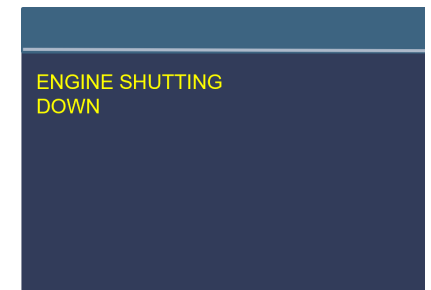
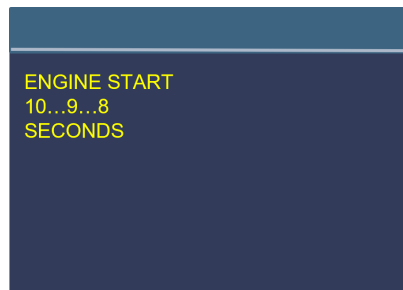
When used, the system enters a low-power standby mode, turning off the display to conserve energy. When the first float switch is triggered (e.g. low level), the module powers on the display and starts the engine. The engine runs until the second switch (e.g. high level or shut-off) is activated, at which point the controller shuts down the engine and returns to standby mode.

Two Configurable Float switches

DI1 Setup	
DI1 Function	Start
Active State:	Closed
On Delay(s):	1.0
Off Delay(s):	1.0

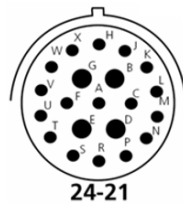
DI2 Setup	
DI2 Function	Stop
Active State:	Closed
On Delay(s):	1.0
Off Delay(s):	1.0

Automatic Start / Stop Alerts



General Technical Specifications:	
Operating Volts	10VDC to 32VDC
Operating Temp	-40°C to +70°C
Storage Temp	-40°C to +80°C
Ingress Protection	IP66 (front) / IP67 all around
Display	3.5" a-Si TFT Color LCD
Viewing Angle	130° / 110°
Brightness	750 NIT
Outputs	Fuel/Start/Preheat (Up to 5A each)
Inputs	Coolant Temp, Oil Pressure, RPM

Pin out connections:



Connector:
HDP24-24-21PN

PIN	SIGNAL	PIN	SIGNAL
A	Key On Accessory	M	Not used (Autostart version DI Common)
B	Battery +	N	Fuel Level (Sender input)
C	Tachometer	P	Fuel Level (Sender input)
D	Start (Crank)	R	Charge / Alternator Excite
E	Ground	S	Auxilliary input 1
F	Alarm Out	T	Auxilliary input 2
G	Ignition / Fuel Solenoid	U	Coolant Temp (Sender input)
H	Preheat / Glow	V	Temp Switch / Shutdown
J		W	Oil Pressure Switch / Shutdown
K	Not used (Autostart version DI1)	X	External Shutdown / Emergency Stop
L	Not used (Autostart version DI2)		

Configurations Available

* ... AS - Adds Auto-Start Module to Controller



DS3000
Display Only



M140P00*
Controller w/ Harness + Key switch



M140P10*
Controller in 8x7 Black Metal Enclosure



M140P20*
Controller in NEMA 4X Enclosure