Product Manual

Generator Display & Control Panel

J1939 Engines

Part Number: MVP-G142
Revision: 1.0

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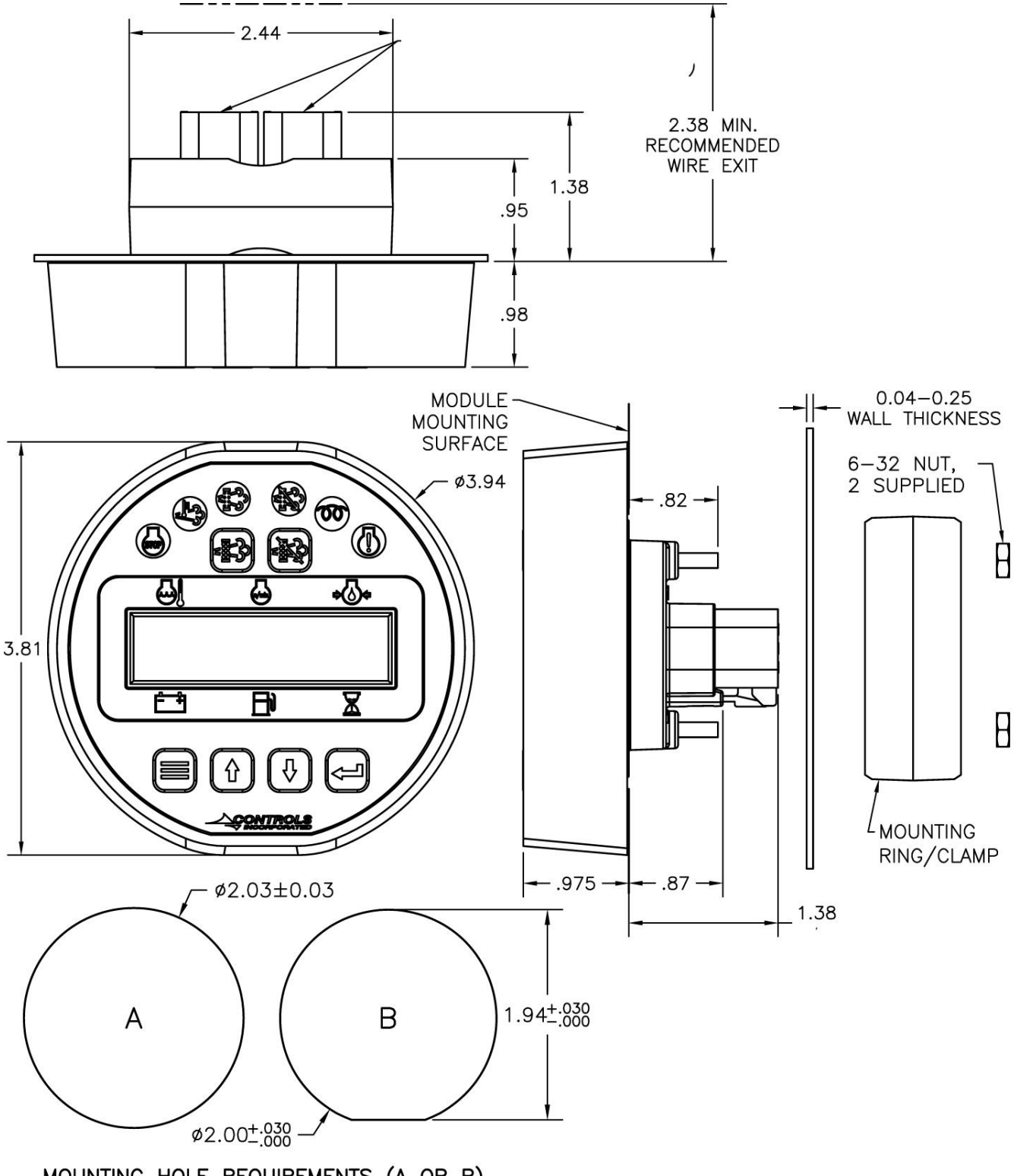
INSTALLATION INFORMATION



MOUNTING HOLE REQUIREMENTS (A OR B)

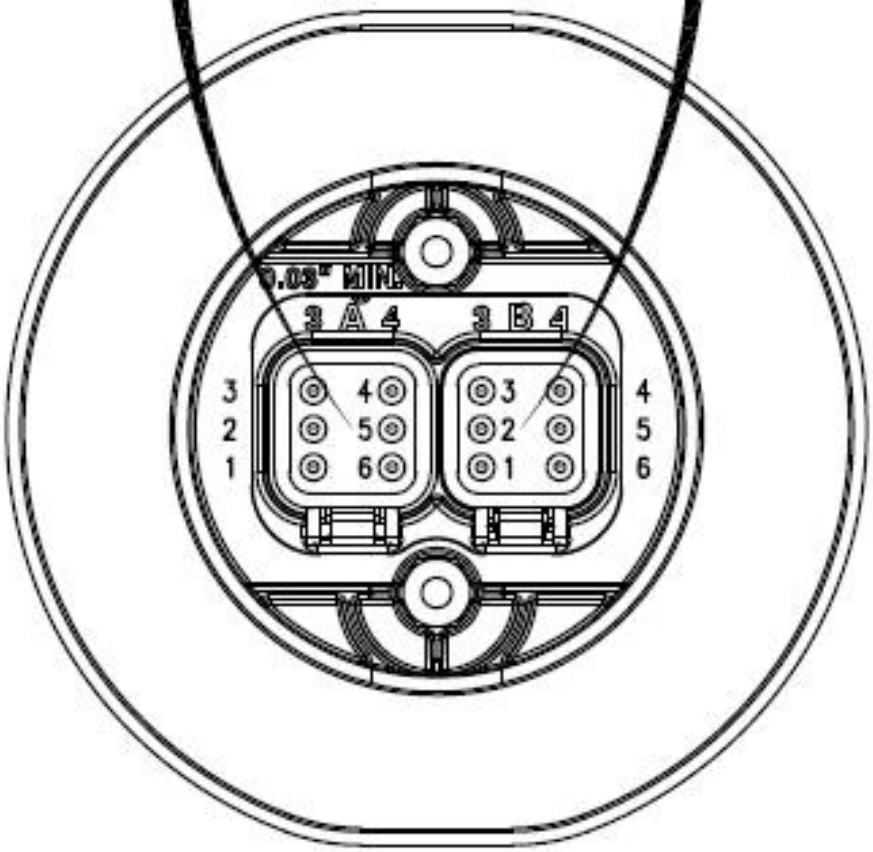
MODULE CONNECTOR INFORMATION

CONNECTOR A

FUNCTION	PIN
BATTERY +	1
CAN HIGH	2
CAN LOW	3
DIGITAL INPUT 1	4
FUEL LEVEL INPUT	5
BATTERY -	6

CONNECTOR B

FUNCTION	PIN
ALARM OUTPUT	1
DIGITAL INPUT 3	2
N/A	3
N/A	4
DIGITAL INPUT 2	5
RELAY OUTPUT 2	6



CONTROL PANEL SPECIFIC ALARMS AND SHUT DOWNS

The panel has its own engine safety alarms and shut downs that can be enabled. These alarms and shut downs are managed by the control panel. The available options are listed below and can be accessed via the Engine Safety Configuration menu.

Each alarm must be enabled in the Engine Safety Configuration menu to activate.

Heading	Default	Range	Units
Sender Check Bypass	0:10	0:05 – 1:00	Min:Sec
Fuel Level Check	Off	Off / Always / Run	
Low Fuel Pre Alarm	20	0 - 100	%
Low Fuel Alarm	1	0 - 100	%
Fuel Alarm Delay	0:05	0:01 – 1:40	Sec
Fuel Level Alarm Action	Shutdown		
Oil Pressure Check	Run	Off / Always / Run	
Low Oil Press Pre Alarm	15	0 - 100	PSI
Low Oil Press Alarm	10	0 - 100	PSI
Oil Pressure Alarm Action	Shutdown		
Oil Press Alarm Delay	0:05	0:01 – 1:40	Sec
Temperature Check	Run	Off / Always / Run	
High Temp Pre Alarm	220	150 - 300	Deg F
High Temp Alarm	230	150 - 300	Deg F
Temperature Alarm Action	Shutdown		
Temp Alarm Delay	0:05	0:01 – 1:40	Min:Sec
Battery Volts Check	Off	Off / Always / Run	
Low Battery Pre Alarm	12.0	0.0 – 40.0	Volts
Hi Battery Pre Alarm	15.0	0.0 – 40.0	Volts
Over Speed Check	Off	Off / Always / Run	
Over Speed Alarm	3000	650 - 5000	RPM
Over Speed Alarm Delay	0:05	0:01 – 1:40	Min:Sec

1) Off / Always / Run – Describes when the parameter will be monitored for alarm conditions. Run refers to when the engine is running. Off disables the alarm conditions. Always enables the alarm constantly regardless of engine state.

2) Alarm Delay – The time period, after Sender Check Bypass, that the parameter must be on the alarm condition before the alarm becomes latched.

Indicator Lamps

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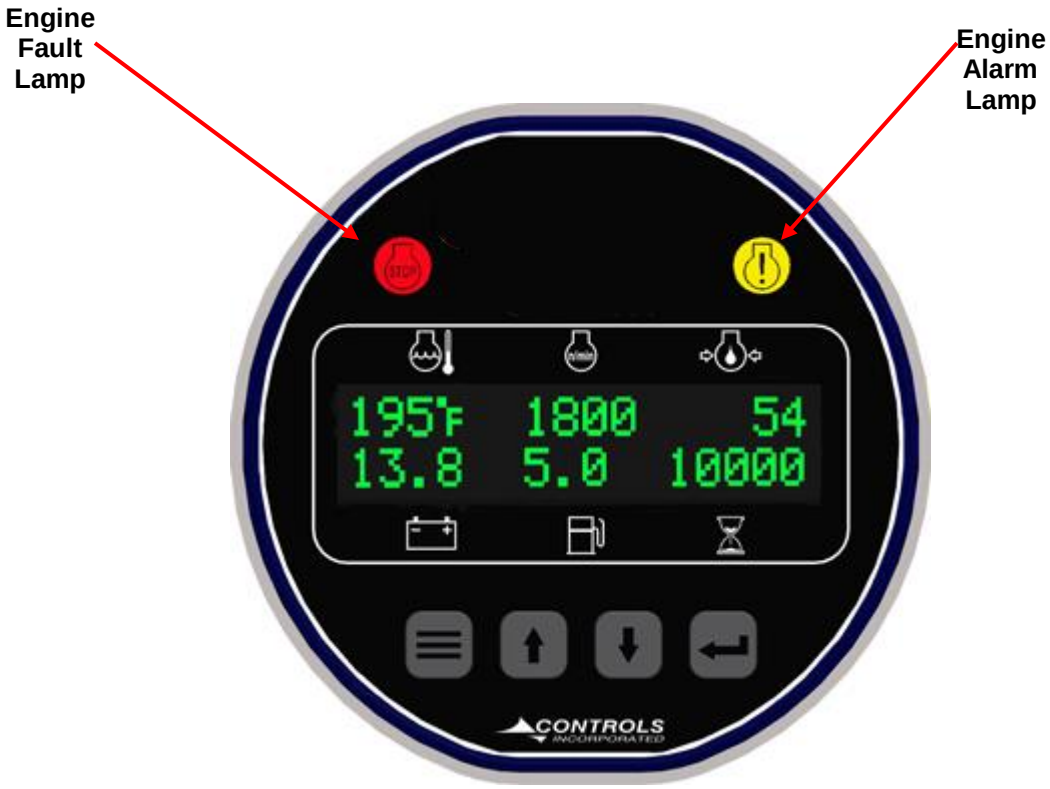

CONTROL PANEL ANALOG AND DIGITAL INPUTS

The panel has one analog input and up to one digital input (close to ground) available to monitor other components, senders or signals. These inputs can be used for a number of purposes including alarms and shut downs.

Input	Heading	Default	Options	Connector	Pin
Digital 1	Normally	Open	Open / Closed	B	1
	Function	None			
	Message	None			
	Check	Off	Off / Always / Run		
Digital 2	Normally	Open	Open/Close	B	5
	Function	None			
	Check	Off			

Digital Outputs

1) Alarm – Engine shutdown when active with display message as assigned. A red lamp will also be illuminated.
2) Pre Alarm – Warning message will be displayed along with a yellow lamp when active.
3) Pre Alarm & Alarm - Energizes an external audible alarm when a pre alarm or alarm condition is present. Pressing the ENTER button will silence.
4) Alarm Horn - Energizes an external audible alarm when an alarm condition is present. Pressing the ENTER button will silence.
5) Engine Run - Relay will be active when engine RPM is greater than 600. Typically used to drive an auxiliary circuit such as louvers or send a signal to a monitoring station.
6) Low Oil Press Alarm - Relay closes if a low oil pressure shutdown is detected.
7) High Coolant Temp Alarm - Relay closes if a high engine temperature shutdown is detected.
8) Over Speed Alarm - Relay closes if an over speed shutdown is detected.
9) Over Crank Alarm - Relay closes if an over crank alarm is detected.
10) Low Fuel Level Alarm - Relay closes if a low fuel level shutdown is detected.
11) Fuel / Run - Relay will be active during an engine start request and while the engine is running.
12) Custom 1 - Reserved for OEM applications.

13) Preheat - Relay will be active during programmed preheat period. Used to drive a preheat relay.

Digital Function Activation

1) Off / Always / Run – Describes when the parameter will be monitored for alarm conditions. Run refers to when the engine is running. Off disables the alarm conditions. Always enables the alarm constantly regardless of engine state.

2) Alarm Delay – The time period, after Sender Check Bypass, that the parameter must be on the alarm condition before the alarm becomes latched.

CONTROL PANEL RELAY OUTPUTS

The panel has three relay outputs available to signal other devices based on predefined events. These Outputs can be used for a number of purposes including engine operation or driving an audible alarm.

Input	Heading	Default	Connector	Pin
Relay 1			B	1
	Function	Pre & Alarm		
	Polarity	Positive		
	Initial State	Off		
Input	**Heading**	**Default**	**Connector**	**Pin**
Relay 3			B	6
	Function	None		
	Polarity	Positive		
	Initial State	Off		

MENU SYSTEM

To Enter Menu System

Hold MENU button and press ENTER button.

Menu Navigation

Press MENU button to scroll menu options.

Press UP arrow button to enter menu.

Press DOWN arrow button to reverse.

Exit Menu System

Hold MENU button and press ENTER button.

To Change a Setting

Press ENTER button to bring up brackets [ ].

Press UP arrow button and DOWN arrow button to change setting.

Press ENTER button to make selection, brackets disappear.

Recycle key to the OFF position after changing a setting.

Main Menus

Main Menus	Sub Menus		
Active Engine Fault Codes	View/Scroll Active Fault Codes		Viewing Menus
Stored Engine Fault Codes	View/Scroll Stored Fault Codes		
Engine Parameters	View ECU Engine Information (% Load, Torque, Oil Temp, etc.)		
Generator Parameters	View Generator Information		
Operation Event Log	View/Scroll Stored Operation Events		
Alarm Event Log	View/Scroll Stored Alarm Events		
Engine Identification	Engine Model # View		
	Engine Serial # View		
Module Information	Control Unit Part# View		
	Control Unit Software Version View		
Controller Setup	Quick Setup	(1)	Configuration Menus
(PASSWORD PROTECTED)	Engine Parameter Configuration	(2)	
	Generator Configuration	(3)	
	Input Configuration	(4)	
	Output Configuration	(5)	
	Throttle Configuration	(6)	
	Module Configuration	(7)	
	Display Configuration	(8)	
	CAN Configuration	(9)	
	Maintenance Configuration	(10)	
	XCAN-AC Calibration	(11)	
	Clutch Configuration	(12)	

To access the controller setup menus, a password is required. The password is 4345.

Configuration Menus

(1)	**Quick Setup**	Engine Type – Default = Electronic T3
		Engine Mfg.
		TSC Minimum Speed
		TSC Maximum Speed
		Performance Display
(2)	**Eng. Parameter Configuration**	Engine Type
		Parameter Selection (Speed, Coolant Temp., Oil Pressure, Fuel Level, Voltage, Hour Meter)
		Parameter Setup (Varies based on parameter)
(3)	**Generator Configuration**	Phase Type
		Voltage Type
		Generator Pole Pairs
		Generator Run Detect
		Activation Frequency
		Activation Delay
		Deactivation Frequency
		KWH Reset
(4)	**Input Configuration**	Configure Selection (Channels/Message)
		Digital 1, 2, 3 Setup
(5)	**Output Configuration**	Configure Selection (Channels/Message)
		Relay 1 Function (Default to Fuel/Run)
		Relay 2 Function (Default to Preheat)
		Relay 3 Function
(6)	**Throttle Configuration**	Throttle Type
		Cooperative TSC Mode
		TSC Minimum Speed
		TSC Maximum Speed
		TSC Bump Speed
		TSC Ramp Rate
		Throttle Curve
		Multi State Speeds 1-4

(7)	**Module Configuration**	Low Power Mode
		Power Save Delay
		Pre-Alarms Displayed (Default = 4)
		Primary Run Source
		Secondary Run Source
		Check Run Criteria
		Clear Operation Log (Default = No)
		Clear Alarm Log (Default = No)
		Clear # of Starts
		Engine Run Criteria
		Engine Stop Criteria
(8)	**Display Configuration**	Display Mode
		Voltage Display
		English/Metric Selection
		Performance Display Off/On
		Fuel Display
(9)	**CAN Configuration**	Engine Manufacturer
		TSC1 Address (Default = 3) Others available
		Source Address (Default = 44) Others available
		Engine Address (Default = 0) Others available
		Speed Transmit On/Off
		Temperature Transmit On/Off
		Oil Pressure Transmit On/Off
		Fuel Level Transmit On/Off
		Voltage Transmit On/Off
		Hours Transmit On/Off
		Faults Transmit
		JDLINK Auto Accept
(10)	**Maintenance Configuration**	Service Messages
		Schedule Selection
		Schedule Reset
		Schedule Interval
		Schedule Warning
		Schedule Trip
		Schedule Message

(12) Clutch Configuration	Clutch #1 Engage Trip (Default = None)
	Clutch #1 Engage Speed (Default = 800 rpm)
	Clutch #1 Engage Load (Default = 0%)
	Clutch #1 Engage Coolant Temperature (Default = 150°F)
	Clutch #1 Engage Delay (Default = 0:00)
	Clutch #1 Engage Interval (Default = 0:00)
	Clutch #1 Release Trip (Default = None)
	Clutch #1 Release Speed (Default = 800 rpm)
	Clutch #1 Release Load (Default = 0%)
	Clutch #1 Release Coolant Temperature (Default = 150°F)
	Clutch #1 Release Delay (Default = 0:00)
	Clutch #1 Release Interval (Default = 0:00)