

MODEL H30

DIESEL ENGINE CONTROLLER

SIMPLE, ACCURATE, AND CONSISTENT ENGINE CONTROL



INTRODUCTION

Houston Street Technologies' Model H30 diesel engine controller was designed to provide simple, accurate and consistent engine control for a variety of diesel power applications. When used with an ECU controlled engine the H30 utilizes SAE J1939 CAN bus protocol to communicate desired engine control characteristics as well as display all relevant engine operating parameters and fault codes, both stored and active.

In addition to its core functionality of MANUAL RAMP, MANUAL STEP, AUTO and ENGINE STALL PROTECTION (ESP), the H30 can also be tailored to any customer's request for a wide range of unique industrial applications.

SYSTEM SPECIFICATIONS

Operating Voltage:	8-32VDC
Operating Temperature:	-20° to +70°C (-4 to +158°F) [without LCD heater]
Operating Temperature:	-30° to +70°C (-22 to +158°F) [with LCD heater]
Storage Temperature:	-30° to +80°C (-22 to +176°F)
Display:	FSTN, LED Backlit, 240 X 320 Pixels, 3.9" Diagonal, Full Monochrome Graphics
Housing Connectors:	(1) Deutsch DT04-12PA, (1) Deutsch DT04-12PB, (1) Deutsch DT04-12PC
Mating Connectors:	(1) Deutsch DT06-12SA, (1) Deutsch DT06-12SB, (1) Deutsch DT06-12SC
Digital Outputs:	(3) Dedicated SPST Form C, 10 Amp Relays (4) Programmable SPST Form C, 3 Amp Relays
Digital Inputs:	(8) Common Ground, Digital Inputs
Analog Inputs:	(4) Programmable 4-20 mA, 0-5 VDC or Resistive Inputs
Standard Communications:	J1939 CAN bus

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OPERATING MODES

MANUAL RAMP

When in MANUAL RAMP mode, the engine will operate within a range of configurable low and high RPM values, increasing and decreasing speed in one of the following manners: 5 second linearly or exponentially.

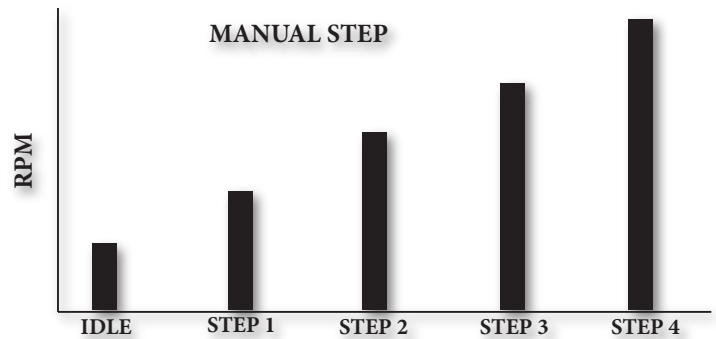
When using 5 second linear ramp rate, the engine speed will linearly increase from the low RPM setting to the high RPM setting in a 5 second interval when the UP button is held. Engine speed will decrease in the same linear fashion when the DOWN button is held.

When using exponential ramp rate, the engine speed will exponentially increase from the low RPM setting to the high RPM setting when the UP button is held. Engine speed will decrease in the same exponential fashion when the DOWN button is held.

With either ramp rate, each individual press of the UP or DOWN button will increase or decrease the engine speed by approximately 16 RPM.

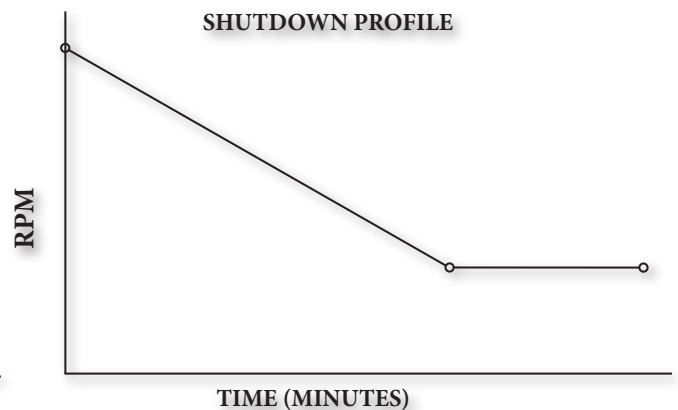
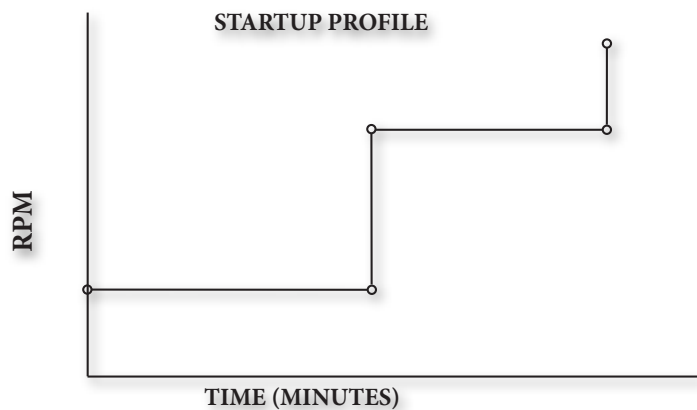
MANUAL STEP

When in MANUAL STEP mode, the engine will operate at various user defined RPM values, increasing and decreasing speed in set increments, or steps. A maximum of (10) steps can be used to quickly increase or decrease engine speed with each press of the UP or DOWN button.



AUTO

When in AUTO mode the engine will start and stop based off of digital inputs or pressing the U/D buttons. Startup and shutdown profiles are easily configurable, allowing for warm up and cool down cycles to minimize stress on both the engine and engine-driven equipment.



ENGINE STALL PROTECTION

When ENGINE STALL PROTECTION (ESP) is enabled, the H30 can be used to engage and disengage conveyors that may be overloading the engine, causing it to stall. One of the H30's digital outputs can be configured to engage the feed forward at a set RPM limit (either energize or de-energize to feed) while a second digital output can be used to reverse the conveyor for a set amount of time (0.0 to 1.0 seconds) when a low RPM limit is reached. Reversing the conveyor is optional, the H30 can be configured to simply stop the conveyor until the engine increases to a minimum threshold speed and then re-engage the feed forward.