



EMS-D120

Engine Monitoring System



DYNON AVIONICS

Innovative Avionics for Experimental Aircraft

www.dynonavionics.com



EMS-D120 Engine Monitoring System

Dynon's EMS-D120 is a very attractive and highly automated engine monitoring system that offers solid-state reliability and a large 7" diagonal, sunlight readable, color LCD.

The EMS-D120 replaces up to 16 different gauges in a graphical format. Key features include leaning via EGT peak detection, fuel computer, user-defined alarm limits and ranges, audio & visual alarms, user-configurable pages, simple setup, English or Metric measurement units, system clock, contact inputs, timers and user-friendly softkey menus.

The 854 x 480 high resolution LCD affords split-screen partitioning to display two pages simultaneously. Many of the pages provided offer a high degree of user-defined

configurability to accommodate different engine types and pilot preferences. Each screen is easily called up via Hotkey buttons that provide quick access.

When wired to other Dynon instruments via the Dynon Smart Avionics Bus (DSAB), the EMS-D120 can additionally display their data whenever called for by the pilot.

The price includes the instrument, a convenient mounting tray, three year warranty and free lifetime software updates available from Dynon's website. Preconfigured engine probe/harness packages are available on an optional basis for several of the popular engines in the market. Individual probes are also available to configure other engine systems.

Specifications

Mechanical

Size: 6.95" wide x 4.90" tall x 4.51" deep
(177 x 125 x 115 mm)
Mounting: Mounting tray included to facilitate front removal
Weight: 2 lb. 6 oz. (1.33 kg)

Power

Voltage: 10 - 30 Vdc
Power: 14 Watts typical

Screen

Type: AMLCD, TFT (Thin Film Transistor)
Backlight: 0.8-400 nit, user-adjustable
Size: 7.0" diagonal (96 mm)
Resolution: 854 x 480 color pixels

Sensor Inputs

- 6 - EGT (Type K Thermocouple)
- 6 - CHT (Type J Thermocouple)
- 2 - Fuel Level (Resistive [0-1K ohm] or Capacitance [0-5 volt])
- 2 - RPM (Frequency)
- 2 - Contacts
- 1 - Manifold Pressure (Voltage)
- 1 - Oil Temperature (Resistive)
- 1 - Oil Pressure (Resistive)
- 1 - Fuel Pressure (Resistive)
- 1 - Fuel Flow (Frequency)
- 1 - Amps (Shunt)
- 1 - Volts
- 1 - Turbine Inlet Temperature (Type K Thermocouple)
- 3 - General Purpose (Either resistive or voltage for OAT, Fuel Tanks 3 & 4, Coolant Temp/Press, Carb Temp)

Outputs

- 1 - Alarm Light Contact
- 1 - Audio Alarm
- 1 - RS-232
- 1 - DSAB (Dynon Smart Avionics Bus)

Connections

- 1 - D-25 pin female connector for all EGT/CHT probe inputs
- 1 - D-37 pin male connector for probes, power, DSAB, contacts

Environmental

Operating Temperature: -22° to 122° F (-30° to 50° C)

Split Screen Examples

Default Screen

This example screen displays two pages simultaneously to present an overview of most measurements. Both pages are highly configurable. A hotkey button press switches the screen to other pages in a user-defined order.

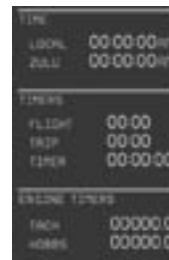


System Overview Page

Aux Page

Times Page

This page presents 2 clocks to keep track of local and Zulu time. It additionally includes two timers for cross country work and a third generic timer for whatever use the pilot may need. One common use of the generic timer is to serve as a reminder to switch fuel tanks. The Tach and Hobbs timers keep an ongoing record of the engine and are stored in non-volatile memory for permanent record keeping.



Fuel Computer Page

This page displays all fuel parameters in one convenient page. It can display fuel levels for up to 4 tanks. When coupled to the optional fuel flow sensor, this page additionally provides total fuel used, fuel remaining and the time left before fuel exhaustion.



Checklists & Aviation Data

Up to 25 pages of pilot-defined checklists and aviation data may be stored and called up on demand while simultaneously displaying the primary engine gauges.



Options

- Engine Monitor Packages and Individual Probes
- Fuel Flow Sensor for Fuel Computer