

# MTH-103E

## Tachometer / Hourmeter / Trip

The MTH-103E™ is a microprocessor-based 5-digit tachometer, hourmeter with output trip. The trip can be programmed to activate on overspeed, underspeed (Class C) or hours. Unit may be pickup-powered or DC-powered.



## FEATURES

Selectable overspeed, underspeed (Class-C) and hours trip

Both signal and power may be derived from magnetic pickup.

High accuracy: 5-digit display, 1 rpm resolution, 100,000 hour range.

Field configurable with front keypad for any number of pulses per revolution, trip point value, and for preset / reset hours.

Displays speed, hours, and setpoints on separate screen

Displays Alarm Log history

Fast overspeed reaction time of 100 msec

Backlit display when DC powered

Standard SAE case size fits engine panels with 3-3/8" openings.

High shock and vibration resistance. Gasketed and spray proof.

Highly resistant to electrical noise

## SPECIFICATIONS

Power: Magnetic pickup or 9 - 30 VDC

Display: Alphanumeric LCD

Input Signal Frequency: From 10 to 13,000 Hz

Minimum required input signal voltage is 4.0 VAC when pickup powered and 1.5 VAC when DC powered

Maximum permissible input signal is 15 VAC

Tachometer Accuracy: 1 RPM resolution, within 0.2% under all combined environmental conditions

Hourmeter: 100,000-hour range (99,999), 1-hour increments. Display is visible and time accumulates only when the signal is applied to terminals A and B

Trip: Setpoint value is field-settable directly in RPM or hours (counts up or down). Normally open solid-state contacts at terminals 5(+) and 6(-) close on trip.

Reaction time of 0.1 seconds. Maximum continuous contact rating of 0.15 amps, 400 VDC

Trip Accuracy:  $\pm 1$  unit, maximum

Hourmeter Accuracy: 0.2% of reading. Retains count in memory when signal or power is removed.

# SPECIFICATIONS

## Environment Temperature:

Operating: -5 to +175 DegF (-20 to +79 DegC)  
 Storage: -40 to +195 DegF (-40 to +90 DegC)

Vibration: Modified MIL-810E (N3)

## CSA CERTIFICATION



### Class I, Division 1, Groups A, B, C, and D

#### When Pickup Powered:

Dynalco magnetic pickup M203, M204 or M205 must be used.

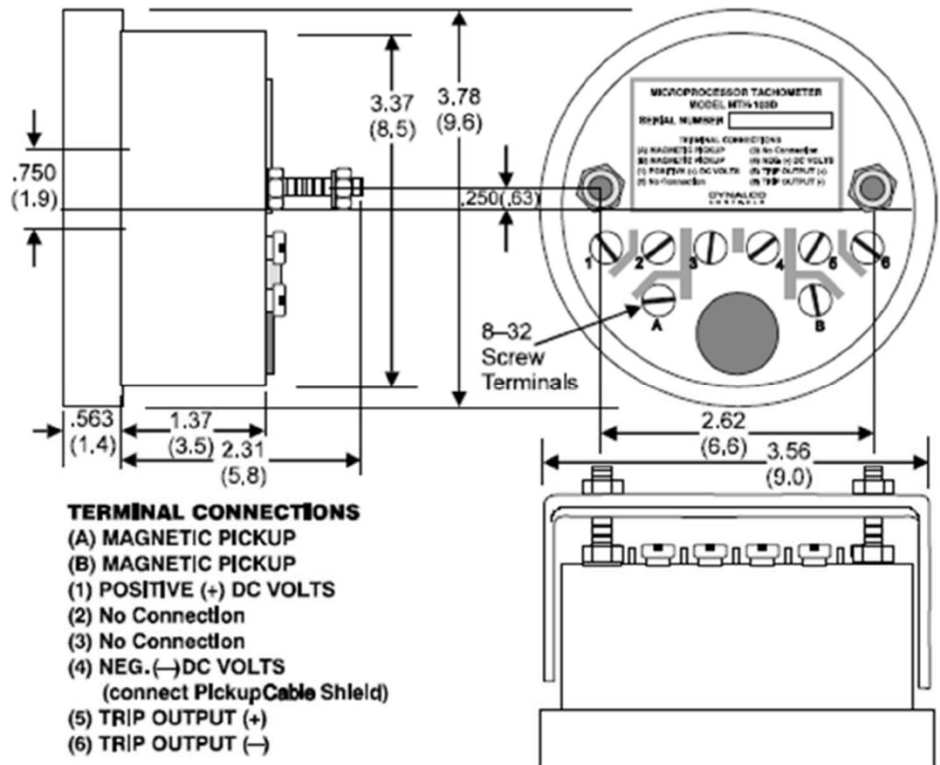
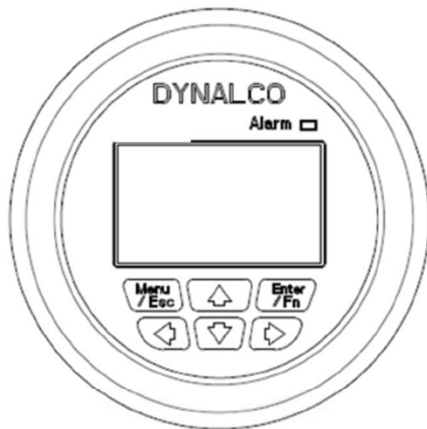
### Class I, Division 2, Groups A, B, C, and D

#### When 9 - 30 VDC Powered:

Dynalco magnetic pickup M201, M202, M203, M204, M205, M207, M208, M231, M233 or M281 must be used to provide the speed signal.



## OUTLINE DRAWING AND CONNECTIONS



*Dimensions in inches (cm)*