

IC-100

CD Ignition System

Description

The IC-100 is a microprocessor-controlled, spark capacitive discharge ignition system capable of supplying ignition energy for a wide range of gas engines with 1 to 8 cylinders.

The number of cylinders and the corresponding firing pattern, as well as the trigger disc configuration, are programmed individually.

Integral to the IC-100 is the capability for three-dimensional timing mapping:

- Potentiometer Curve (up to 38° Programmable Span)
- 0–5 V Analog Signal
- Cylinder/Cylinder Timing Adjustment

The IC-100 is capable of firing up to 8 cylinders with either one or two spark plugs per cylinder. In case of two spark plugs per cylinder, the corresponding ignition coils must be wired in series.

One pick-up senses impulses from a trigger disk mounted on the camshaft (single-firing) or crankshaft (double-firing). This information is sent to a microprocessor which controls the ignition system.

Operational Features

The IC-100 has several functional features to ensure proper operation:

- Trigger Signal Check
- Input Signal Fault Recognition
- Shutdown
- Manual Ignition Energy Adjustment
- Hour Meter

Safety Features:

- Overspeed Shutdown
- Permissive Start Output
- Pick-up Fault Detection
- Internal Error Check
- Errors are Displayed via LED Flash Codes

Permissive Start:

A solid-state output is available capable of sinking 150 mA. This output can be used to power an external relay which could (for example) open the fuel valve.

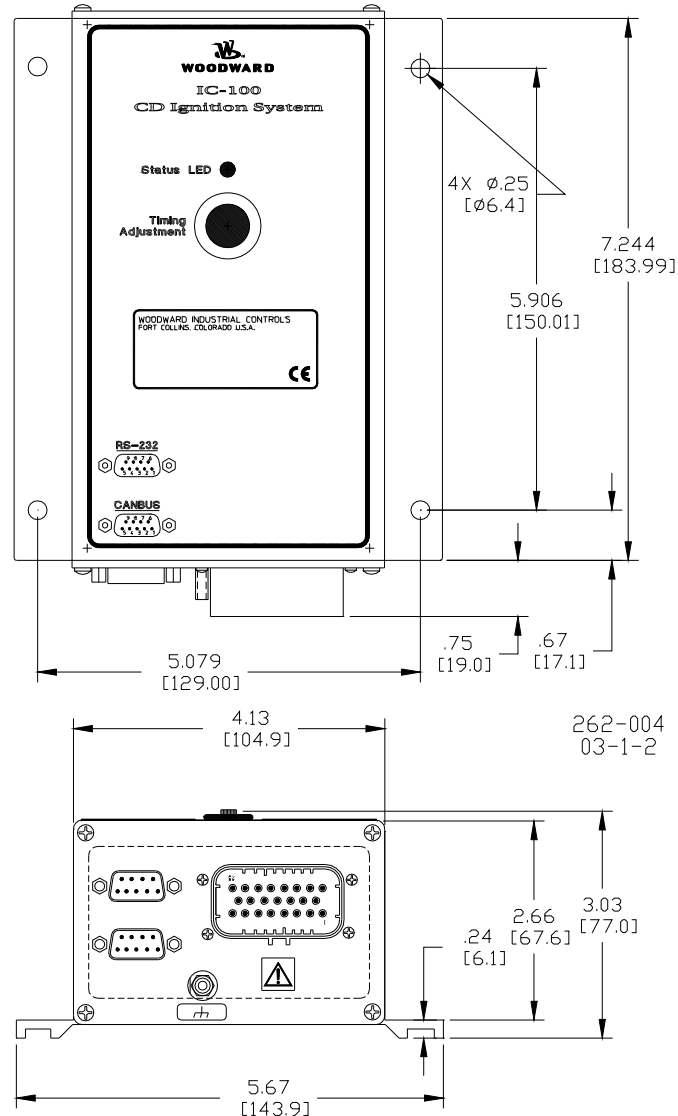
Technical Manual 26205



- User programmable
- RS-232 and CAN communications
- Manually programmable energy allows adaptability to varying gas quality
- High energy system
- Programmable overspeed protection
- Adjustable energy levels could improve spark plug life
- CE Compliant

Specifications

Power Consumption	24 V operation: 18–32 Vdc (2.2 A max.)
Trigger Input	Variable reluctance (passive) +2 Vdc min., 80 V p-p max, 10 Hz to 10 kHz
Sensor Inputs	0–5 V sensors
Permissive Start (solid-state output)	Open collector (NPN) 60 V max., 150 mA max
Communications Ports	CAN, RS-232
Ambient Operating Temperature	–40 to +55 °C (–40 to +131 °F)
Storage Temperature	–40 to +85 °C (–40 to +185 °F)
Mechanical Vibration	SV2: 4g, 5–2000 Hz and RV1: 8.2 Grms, 10–2000 Hz
Mechanical Shock	MS1: 40g peak, 11 ms sawtooth
Air Quality	Pollution Degree II
Installation Overvoltage	Category II



IC-100 Ignition System (Do not use for construction)



PO Box 1519, Fort Collins CO, USA 80522-1519
 1000 East Drake Road, Fort Collins CO 80525
 Tel.: +1 (970) 482-5811 ♦ Fax: +1 (970) 498-3058
www.woodward.com

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For more information contact:

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