

IntelliSpark® Ignition Controller System

The IntelliSpark 16 or 8 series ignition systems are capacitive discharge, low-tension type designs. The system is capable of generating precise spark timing that improves fuel economy, load balance and ignition stability. The controller design incorporates a state-of-the-art 16-bit microcontroller. This technology provides users with a highly flexible solution to meet their ignition needs.

The user can choose from one of five methods of crankshaft sensing for a 4-stroke engine and two methods for a 2-stroke engine.

FW Murphy's smart ignition coils used with this product incorporate a sense lead connection for real-time spark plug demand voltage measurements by the ignition controller. This allows the controller to:

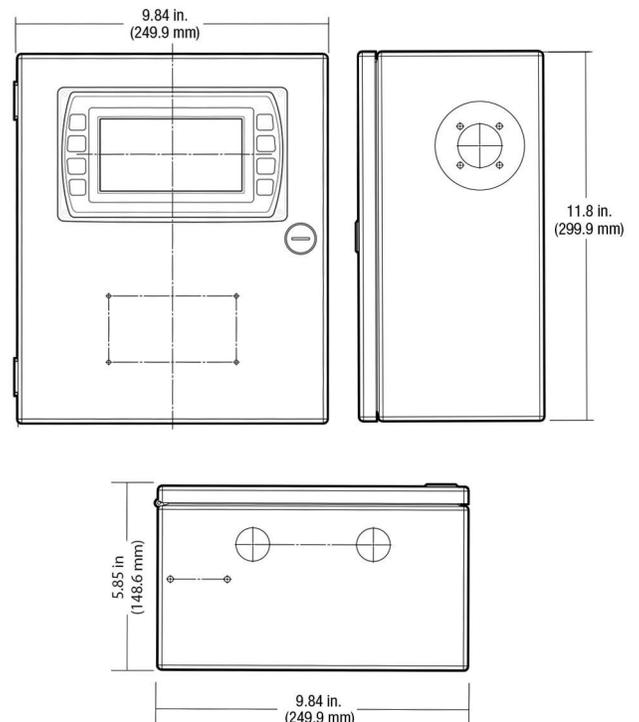
- Measure demand on each cylinder's plug for diagnostic purposes;
- Automatically control the energy delivered to the smart coils to optimize spark plug life;
- Use the measured demand in the unique camless crank method to determine the compression stroke, eliminating the need for a camshaft sensor.

Several smart coil designs are available to accommodate specific ignition requirements including: remote mount coils and plug-mounted (integral) coils, non-hazardous or CSA Class I, Div. 2 rated versions.

This system also includes the PV450 full-color screen display for control functions, monitoring, programming and diagnostic testing. The eight-button display includes comprehensive built-in help files and wiring information for the coil harness and a database of common engines for ease of configuration.



Dimensions



Features

- Crankshaft-referenced 16-bit microprocessor based system
- Patented Smart Coil™ technology
- Automatic energy control
- Five timing reference options including camless operation
- Two field-adjustable timing schedules
- Optimized engine combustion and performance
- True primary and secondary diagnostics

Specifications

Power Requirements:

IS-16/8: 10-30 VDC (12/24 VDC nominal) 3.0 amps max

Note: The input current is dependent on firing rate

Environment:

Temperature Operating Range: -40 to +158°F
(-20 to +70°C)

Enclosure Rating: IP66 with display mounted in the enclosure box;
Type 4 without display mounted in the enclosure box

Third Party Approvals:

CSA Certified for Class I, Div 2, Groups B, C, D

IS-8: Fires 8 outputs

IS-16: Fires 16 outputs

Energy Storage:

IS-16/8: 180 mJ max, per tank capacitor

Communications:

IS-16/8: An auxiliary comm port is available, RS-485 interface,
Modbus protocol

Note: This port has a user programmable server ID, runs at
9600 baud or 19.2K.

All parameters available can be modified in parallel using the main
front panel display.

Output Electrical Specifications:

IS-8: Single tank capacitor

IS-16: Dual, alternately fired tank capacitors

Note: These outputs are not ground referenced unless the T lead is
grounded. Recommend careful adherence to installation
instructions. **Maximum Output Current Pulse Rating:** 40 Amps
Note: Current pulse amplitude is dependent on the coils in use
and the tank capacitor voltage.

IT-230 Series coils: 7 Amp pulse @ 230Volts

IT-150 Series coils: 35 Amps @ 150 Volts

IT-250 series coils: 20 Amps @ 250 Volts

4/20 mA Inputs:

4/20mA A: This input retards timing (if programmed) when
schedule A is active.

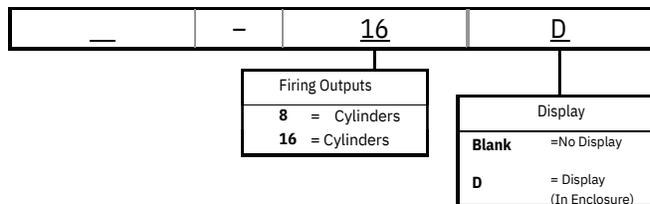
4/20mA B: This input retards the timing (if programmed) when
schedule B is active.

How to Order

Options listed below. All configurations may not be available. Call your sales representative or FW Murphy for more information.

Choose an ignition module for the firing outputs required, add D for display built into the enclosure.

Example IS-16D: ignition module, 16 outputs, with display



DISPLAY NOTE:

You may either choose D for a display built into the enclosure or leave blank and order a loose display and cables for remote mount from the chart below.

| Part Number | Model and Description | Notes |
|-------------|--|---------------------|
| 72700249 | Display Module, PV450NV-03-CSA-IS | Remote Display Unit |
| 78001106 | Cable, Remote Power 50 ft., PVW-450-PWR-50 ft. | |
| 78001107 | Cable, Remote Communication 50 ft., PVW-450-RS485-50 ft. | |

| Approximate Shipping Weight and Dimensions | | |
|--|--------------|---------------------------|
| Model | Weight | Dimension |
| IS-8, 16 (D) Ignition modules | 20 lbs. | 16 x 16 x 11in. |
| PV450 Display | 1 lbs. 7 oz. | 4-1/2 x 4-1/2 x 4-1/2 in. |
| Power Cable 50 ft. | 2 lbs. | Bundled cable |
| Communication Cable 50 ft. | 2 lbs. | Bundled cable |

Please contact your local FW Murphy Sales Representative for a complete IntelliSpark Ignition System and FW Murphy products.



CONTACT

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