

IntelliSpark™ Ignition Controller System



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

The IntelliSpark™ 32/16/8 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.

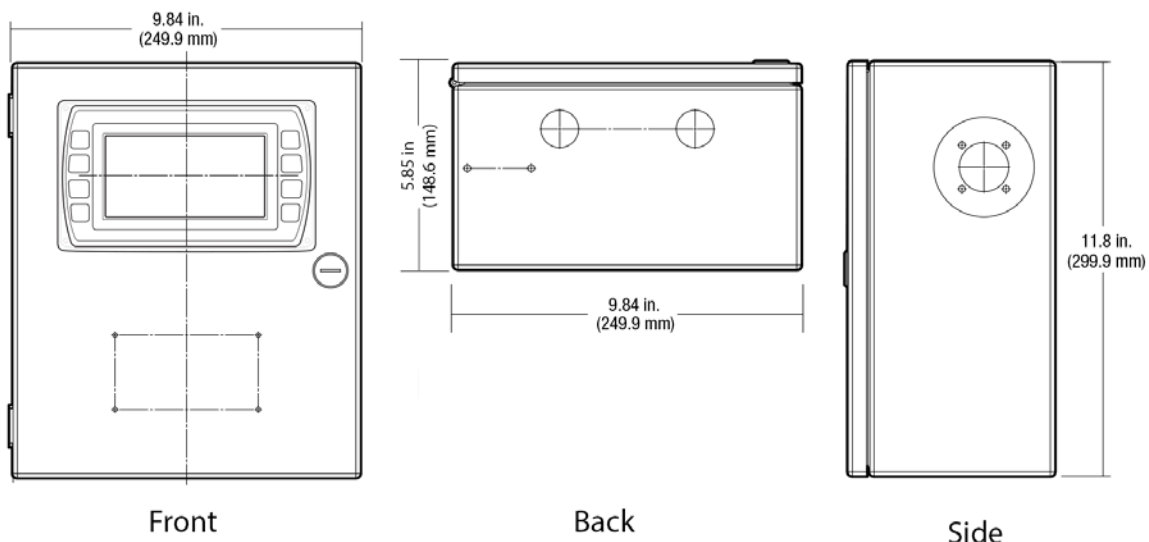
The Murphy ignition coils used with this controller are smart coils with a sense lead connection for spark plug demand voltage measurements allowing the system to:

- 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 C1, D2 rated versions.

This system also includes the Murphy PV-450 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.

Product Dimensions



Specifications

Power Requirements:

IS-16/8: 10-30 VDC (12/24 VDC nominal) 3.0 Amps max
 IS-32: 10-30 VDC, 6.0 Amps max
 Note: The input current is dependent on firing rate

Environment:

Temperature Operating Range: -4° to +158° F (-20° to +70° C)
 Enclosure Rating: IP67 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
 IS-32: Fires 32 outputs, 2 outputs can fire simultaneously

Energy Storage:

IS-32/16/8: 180 mJ max, per tank capacitor

Communications:

IS-8/16: An auxiliary comm port is available, RS-485 interface,
 Modbus protocol
 Note: This port has a user programmable slave 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
 IS-32: Quad, alternately fired pairs of tank capacitors
 Ignition Outputs are High-side firing referenced to the T pin on the output harness
 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

IntelliSpark Ignition Module	
Part Number	Description
72700256	IS-8,Ignition Module, 8 Outputs, Without Display
72700252	IS-8D,Ignition Module, 8 Outputs, With Display
72700257	IS-16,Ignition Module, 16 Outputs, Without Display
72700253	IS-16D,Ignition Module, 16 Outputs, With Display
72700258	IS-32,Ignition Module, 32 Outputs, Without Display
72700254	IS-32D,Ignition Module, 32 Outputs, With Display

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

NOTE: Use one display module and cable for each ignition module.

Please contact your local Murphy Sales Representative for a complete IntelliSpark Ignition System and Murphy products from Enovation Controls. A local distributor can be found at www.fwmurphy.com/wheretobuy/us-sales-distributors.

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