

## High Energy Spark Igniter HESI

**For direct spark ignition of most gas or liquid fuels used in oil or gas pilots or main burners**

The SureFire II High Energy Spark Igniter (HESI) is used for direct spark ignition of most gas or liquid fuels used in oil or gas pilots or main burners. The igniter is available in either direct spark rod connection or cable connect spark rod configuration. Spark rods can be various lengths to suit requirements.

The SureFire II versions include:

- Integrated power pack with spark rod
- Split power pack and spark rod options available
- Hazardous area power pack and spark rod options available
- Optional coaxial retractors with and without integrated solenoid valve
- Hazardous area solenoid available

The HESI is classified as being a Class 3 special igniter (NFPA regulations). Typical applications include:

- Petrochemical and refineries
- Heaters and reformers for metal industries and kilns
- Power burners in steam-raising plants
- Direct and pilot ignition for the paper industry
- Black liquor boilers

Please refer to Bulletin SF-2001 for more complete information.

### Features

- Selectable voltage (115/230 vac)
- Visual indication of spark operation
- Proof of spark relay
- Choice of system: Integrated, Kit, or Kit with Quick Disconnect
- Thermal cutout protection integrated in transformer
- Hazardous area options available
- Compact coaxial retractors
- Safety bleed resistor discharges



**SUREFIRE™**



# SureFire II

## Igniters & Pilots

### Specifications

#### HIGH ENERGY IGNITION UNIT

Casing	Die-cast aluminum
Dimensions (LxWxH)	220mm x 120mm x 95mm
Weight	3.25 kg
Protection Class	IP65
Ambient Temperature	-40°C to +60°C
Temperature Monitoring (power transformer)	120°C
Power Supply (ignition in)	115VAC or 230VAC (switchable)
Rated Current	Approximately 1300 mA at 115 V or 650 mA at 230 V
External Protection	4A / type D
Power Input	Approximately 150 VA
Output Voltage	2,000 VDC
Ignition Pulses	Approximately 4-5 pulses/second
Ignition Energy	12 joule/pulse (48 to 60 joule/second)
Duration	50% ED
Continuous Operation	300 seconds
Integrated Ignition Monitoring	Proof of spark relay, potential free contact (maximum contact load: 120V/230VAC @ 10A or 24VDC @ 8A)
Electrode Material	Stainless steel (1.4571)
Diameter	16mm
Standard Length Full Ignition Electrode	1,000mm to 3,000mm
Length Exchangeable Ignition Tip	200mm or 675mm
HESI Tip (HE-S, HE-L) Thread	9/16 in.-18 tpi- unf
Maximum Temperature Ignition Tip	800°C (1,000°C for maximum 10 seconds)
Ignition Tip Service Life	Approximately 400,000 ignitions
Main HESI Rod and Extension Rods	M14, 1mm depth
Junction Box Threads	M14, 1mm depth
GTD Service Life	Approximately 200,000 sparks (depending on usage)

#### HAZARDOUS AREA POWER PACK

Housing Material	Aluminum die casting; stainless steel option available
Dimensions (LxWxH)	309mm x 313mm x 225mm (Nom 12.2 in. x 12.3 in. x 8.9 in)
Environmental	Zone 1 Eexd IIC T5, T6, IP66
Weight	22 kg for aluminum enclosure; 48 kg for stainless steel (special order only)
Operating Temperature	-40°C to +60°C (-40°F to +140°F)
Internal Over Temperature Protection	100°C (212°F), 120°C temperature fuse integrated in transformer

#### HAZARDOUS AREA SPARK ROD

Terminal Box	Aluminum die casting; stainless steel option available
Environmental	IP66 / IP67 Zone 1 Eexd IIC T6
HESI Rod Length	Maximum 3.5 m (11.5 ft.) x 16mm (5/8 in.) diameter; for lengths greater than 3.5 m, contact factory
Material	Stainless steel (1.4301/304) up to 800°C (1,000°C for maximum 10 seconds)

#### Power supply cable to be provided by the customer, including ignition spark monitoring.

Cable Type (standard or similar)	BiHF (K)-J (with 6 individual wires 1,5 mm <sup>2</sup> including PE wire)
Temperature Range	-25°C to at least +135°C
Oversheath	Oil resistant, halogen-free, flame retardant and self-extinguishing