

# DATASHEET

## SmartScan® 121 Microprocessor Flame Scanner for Marine Sector



Hamworthy Combustion's SmartScan® 121 combines modern sensor technology with 'state of the art' control to reliably sense the presence and conditions of flames used in marine applications.



### Key Features

- Increased spectral range allowing oil and gas flames to be detected
- Easy to sight scanner head providing accurate alignment
- Simple to install and commission
- High levels of discrimination between adjacent flames, fireballs and radiating surfaces
- Easy to read bargraph and LED displays
- On-line lens cleaning – no need to remove the viewing head
- Mechanical self-check shutter- vibration resistant
- Separate amplifier to mount away from harsh environments at the burner front
- **CE** marked fully compliant with EMC and electrical safety standards
- Hazardous area – Galvanic isolator – no requirement for separate intrinsically safe earth
- Dual circuits controlling dual flame relay outputs.
- Failsafe operation – third party approved to EN 298 and EN 230
- Intrinsically Safe and Flameproof heads available
- Stainless steel heads for corrosive environments
- Zone 0 IEC and Div 1 FM certified
- Worldwide approvals



ATEX certified



# High-Energy Ignition System For Gaseous and Liquid Fuels Marine Sector



Thousands of proven installations have shown the durability of Hamworthy Combustion's high-energy ignitors for fast, safe, and dependable light-offs.



## Key Features

- Complete system consists of a stainless steel rod, ignitor tip, high-energy power pack, and appropriate cables
- Direct spark provides reliable ignition of gaseous and liquid main fuels including heavy fuel oil
- No auxiliary ignition fuels or pilot are required
- Standard HE systems (gap type) are capable of providing reliable light off of heavy oil provided a number of critical conditions are satisfied
- High-energy spark rod can be retracted out of the main burner flame for reliable, long life operation
- Advanced spark tip design results in rapid, efficient burner ignition
- Replaceable self-cleaning tip resists fouling from unburned fuel and combustion products
- Rugged power pack permits installation at the burner front or outdoors. Available in field repairable NEMA-4, portable, and explosion-proof versions
- Interlocks/position sensors can be supplied for use with burner management systems
- Flexible ignition rod available for tilting burner installations



SPECIFICATIONS	
<b>Ignition spark rod</b>	
Size and material	15.9mm diameter, sealed, stainless steel
Spark tip	Replaceable, high temperature alloy
<b>Power pack</b>	
Dimensions, NEMA-4	305mm x 305mm x 178mm deep, 9 kg
Electric output	2300 VDC, 20 sparks per second minimum, 12 joules stored energy
Duty cycle	2 minutes ON, 5 minutes OFF
Input power options	85 - 265 VAC / 50-60 Hz / 5 Amps @ 100 V
Temperature	-45 to 73°C operating -53 to 93°C storage
Options	NEMA-4 / IP55 illuminated ON/OFF switch, with maintained or momentary contacts. NEMA-4X / IP56 stainless steel enclosure. NEMA-7 / EXd explosion-proof enclosure. Oil resistant input power lead, with weather-proof gland entry

For further information on combustion equipment please contact the head office:

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Hamworthy Combustion Engineering Limited reserve the right to make changes and improvements which may necessitate alteration to the specification without prior notice



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