

P R O V E N C O M B U S T I O N S O L U T I O N S

SmartScan™ 121

Microprocessor Flame Scanner



**Industrial Steam
Generation**



**Utility & Power
Generation**



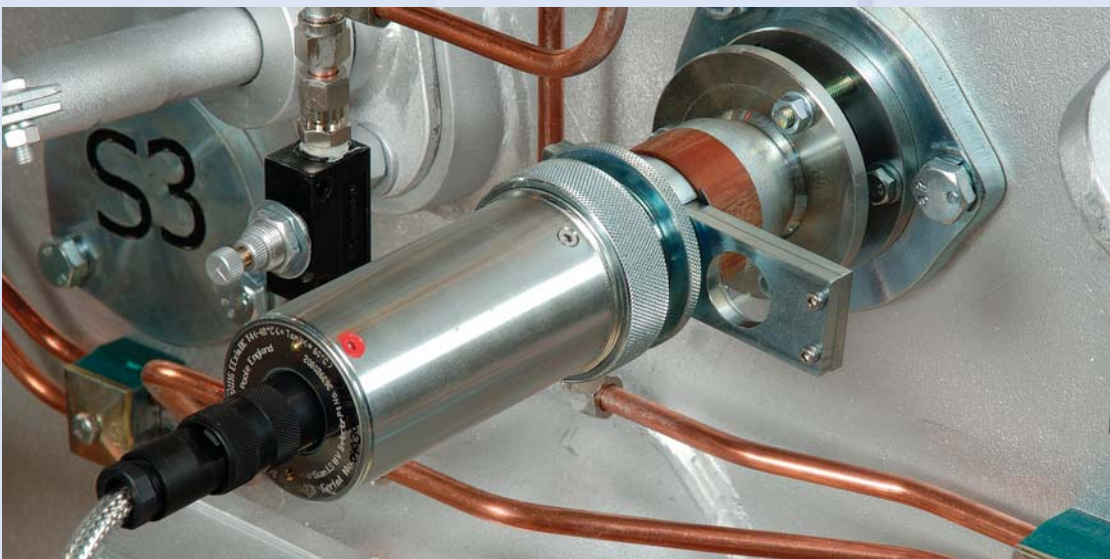
**HAMWORTHY
Peabody**
COMBUSTION

PROVEN COMBUSTION SOLUTIONS

SMARTSCAN™ 121 MICROPROCESSOR FLAME SCANNER

The Hamworthy Peabody Combustion SmartScan™ 121 combines modern sensor technology with advanced microprocessor control to reliably sense the presence and condition of flames.

- Suitable for coal, oil, gas, solid and non-standard fuel scanning
- Fuel select input for two fuel parameters
- Easy to install, commission and operate
- Discriminates between adjacent flames, fireballs and radiating surfaces
- Wide operating temperature
- On-line lens cleaning
- Increased spectral range allowing oil and gas flames to be detected
- Colorful, easy-to-read bar graph
- Reliability is assured with self-checking and self-diagnostic operations
- Vibration resistant, mechanical self-check shutter
- Resists momentary power outages
- Immune to common RFI/EMI
- Intrinsically safe heads with Galvanic isolators or barriers
- Scanner head may be sited up to 1,150 ft from the amplifier card

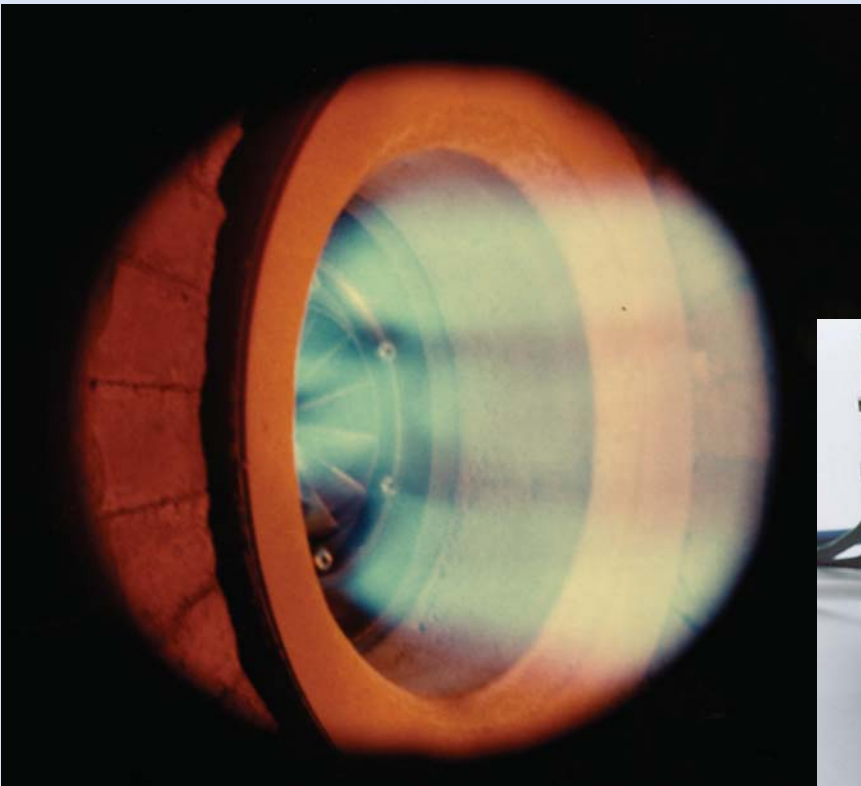


Amplifier Specification

Amplifier:	3u x 12HP rack mount module. Standard depth
On-Off / reset:	Facia mounted push buttons
Power supply:	115Vac + 10% - 15% 50-60Hz 230Vac +10% - 15% 50-60Hz 24Vdc + 15% - 15%
Power consumption:	24VA
Two fuel set-up:	Separate gain parameters
Flame on sensor output:	Volt free contact 3A resistive @ 230Vac
Flame off sensor output:	Volt free contact 3A resistive @ 230Vac
Flame strength indication:	4-20mA
Maximum operating temperature:	140°F (60°C)
Flame on response time:	0.8 seconds
Flame off response time:	1.0 seconds (gas) 3.0 seconds (oil)
Self checking interval:	5.0 seconds factory set
Flicker frequency range:	20-200 Hz (LF) 100-400 Hz (NF)
Flame strength indication:	Red LED bargraph
Flame threshold indication:	Red LED bargraph
Flame gain adjustment:	Facia mounted potentiometer
Flame threshold adjustment:	Facia mounted potentiometer
Internal fault indication:	Red LED
Shutter fault indication:	Red LED
Threshold bias adjustment:	Facia mounted potentiometer
Fuel profile selection:	Volt free digital input
Weight:	3.0 lbs. (1.4 kg)

Detector Head Specification

Maximum operating temperature:	176°F (80°C) (safe area) 140°F (60°C) (haz area)
Peak optical spectral response:	Infra red – 880 nanometres Visible Ultra violet – 440 nanometres Ultra violet – 380 nanometres
Maximum cable distance:	1,150 ft. (350m)
Field cable:	3 conductor, 20 AWG (0.75mm)
Area classification:	Safe area or EE x ia IICT4 140°F (60°C)
Shutter mechanism:	Electro mechanical optical shutter blade
Infra Red detector element:	Silicon photo transistor
Ultra Violet detector element:	Silicon UV enhanced photodiode
Maximum field of view:	16°
Signaling system:	4-20mA
Connection:	Quick release 3 pole shielded plug
Weight:	2.2 lbs. (1.0 kg)



SmartScan™ 121



Proven Combustion Solutions *Worldwide*



USA



UK



Brazil



Canada



China



France



Germany



India



Italy



Japan



Mexico



Netherlands



Poland



Singapore



South Korea



Spain

For further information or to obtain a quotation dealing with any Hamworthy Peabody product, contact:

Hamworthy Peabody Combustion Inc.

70 Shelton Technology Center
Shelton, CT 06484-6406
Tel: 203-922-1199, Fax: 203-922-8866
Toll free: 1-877-PEABODY
E-mail: sales@hamworthy-peabody.com
Web: www.hamworthy-peabody.com

Hamworthy Peabody Combustion Canada Inc.

360 Guelph Street, #36B
Georgetown, Ontario, Canada L7G 4B5
Tel: 905-877-2222, Fax: 905-877-1985
E-mail: sales@hamworthy-peabody.com

Ingenieria Peabody S.A. de C.V.

Calle Dante No. 32 Bis. - 4 Piso
Col. Nueva Anzures, 11590 Mexico, D.F.
Tel: +52 (55) 5254-6510, Fax: +52 (55) 5254-6364
E-mail: ingenieriapeabody@prodigy.net.mx



**HAMWORTHY
Peabody**
COMBUSTION

