



Credfeld Ltd

Flame Monitoring Equipment: Flame Eye FE 4 UV/IR Multi-Fuel Flame Surveillance

TWIN CHANNEL MONITORING WITH SHUTTER SELF CHECK

The UV and IR Cells are incorporated into a single head assembly, reducing the number of Viewing Heads required on multi-fuel burner applications.

Both signal sources are passed from the Viewing Head to the Head Transmitter where they are conditioned into a single analogue signal, which feeds into one Flame Monitor Control Unit. This gives greater flexibility, especially where viewing space is limited.



- Shutter Self Check
- Excellent Discrimination between Burner and Background.
- Volt Free Contact for Alarm and Flame On.
- Fully adjustable Gimble with Air Purge attachment.
- Analogue Flame Signal Level Readout
- Output for Remote Flame Level Meter.

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FLAME MONITOR CONTROL UNIT FACIA
PART NO. GEN18-A5-15HB

- **CONTROL UNIT.** The unit consists of a modular case which houses all components and, for ease of servicing, a plug-in Printed Circuit Board.
- **POTENTIOMETER VR1.** For adjusting the threshold level at which the Flame Relay accepts or rejects the Flame Signal.
- **ANALOGUE METER.** Which indicates the Flame Signal received from the Transmitter Unit and Viewing Head.
- **POTENTIOMETER VR2.** For adjusting missing pulse time (Factory Set).
- **LED RED (FLAME ON).** Illuminated when Flame Relay is energised.
- **LED RED (MONITOR CHECK).** This indication flashes when a Flame Signal is received from Transmitter and the Unit is operating satisfactorily.
- **LED RED (SYSTEM FAULT).** This indication illuminates if a system fault should arise i.e. Faulty component or photo cell fault.
- **PUSH BUTTON (FAULT RESET).** This is the reset for the continuous Self-Check System on the Control Amplifier. If a fault occurs, the system and control unit will "Lock-Out" to a safe condition and cannot be reinstated until the fault has been cleared and the Reset button operated.

UNIT SPECIFICATION

- **OUTPUT 1 (SYSTEM FAILED ALARM).** Relay Volt Free Changeover Contacts. Rated 240V AC. 3 AMPS AC.
 - **OUTPUT 2 (FLAME ON).** 2 Relay Volt Free Changeover Contacts Rated 240V AC 3 AMPS AC.
 - **POWER REQUIREMENTS.** 110/220/240V 50/60Hz 20VA + 10%-20%
 - **CONNECTION.** Through a 20way Plug and Socket (Polarised).
 - **TEMPERATURE RATING.** 0-85°C. SAAAA
 - **FLAME OFF RESPONSE TIME.** 1-8 Seconds. (Fixed).
 - **INPUT 1.** Analogue Flame Signal Input to Voltage Detector Section 0-10.
 - **OUTPUT 3.** Analogue Output to Remote Flame Signal Meter
- The above Input 1/Output 3 are connected through a 5 Pin Din Socket Polarised.
- **WEIGHT.** 2.2Kg.
 - **DIMENSIONS.** H 150xW 140xD 180



HEAD TRANSMITTER FACIA
PART NO. GEN18-A5-16HB

- POTENIOMETER. Adjusts IR Signal Level.
- INPUT POWER SUPPLY. 3 Pole Plug and Socket (Polarised).
- OUTPUT TO VIEWING HEAD. 4 Pole Plug and socket.
- OUTPUT TO CONTROL UNIT. 5 Pin Din Plug and Socket.

UNIT SPECIFICATION

- POWER REQUIREMENTS. 110/220/240V 50/60Hz + 10-20% 12VA.
- OUTPUT TO CONTROL UNIT. 0-10V DC. (Maximum length 100 metres_ 2-Core Screened.
- WEIGHT 1Kg.
- OUTPUT TO UV CELL. 550V AC.
- OUTPUT TO IR CELL. 24V DC.
- DIMENSIONS H 120 W 96 D 95.



Transmitter



Viewing Head

VIEWING HEAD
PART NO. GEN18-A4-18HB

The Twin Channel Viewing Head is fitted with two Photo Cells in tandem. The signal from the flame pattern enters the Viewing Head through a 31.5mm Diameter Quartz Lens, which passes through the UV Photo Tube and to the IR Cell at the set focal length. Each Cell responds in turn to its own set frequency. The signals are interrupted by the Shutter Mechanism, passed back to the Head Transmitter via a 7 core cable, processed and integrated. They are then fed to the System 4 Flame Monitor Control Unit.

TWIN CHANNEL VIEWING HEAD SPECIFICATION

- LENS. Quartz 31.5mm Diameter. 50.5mm Focal Length.
- INPUT. Connection via 6 pole Plug and Socket.
- INPUT CABLE. Maximum Length 7 metres.
- UV DETECTOR. Ultra Violet Sensitive Phototube.
- UV SPECTRAL WAVELENGTH. 190 – 270 Nanometres.
- UV DETECTOR POWER SUPPLY. 550V 50/60Hz.
- IR DETECTOR. Photocoductive Cell.
- IR SPECTRAL WAVELENGTH. 300 – 950 Nanometres.
- IR DETECTOR POWER SUPPLY. 24V DC.
- DIMENSIONS. Overall H 124 W 79 D 100.
- SHUTTER MOTOR POWER REQUIREMENTS. 110V AC or 240V AC 2VA. 50Hz or 60Hz 2 Seconds per Rev.
- SHUTTER DISC. With two windows.
- DARK CHECK SHUTTER TEST. One per second.
- LENS HOUSING. Machined and Spun Steel (Plated).
- BODY. Diecast aluminium. IP65.
- MOUNTING. By gimble with Air Purge Adaptor ¼ BSI.
- CLEANING. Slide Fit. Sealed by two 'O'Seals. Retained by Spring Clip.
- OPERATING TEMPERATURE. 0 - 90°C.
- WEIGHT. 1.25Kg.