

UVH6/WP & UVH7/WP FLAME SCANNERS

INTRODUCTION

The UVH6/WP & UVH7/WP are a range of self-checking Ultra-Violet flame scanners for use with any of the Elcontrol self-checking flame amplifiers, such as the GP320/SCUV, GP320/EURO/SCUV, UV10 etc.

The casework is cast aluminium or polycarbonate and offers ingress protection to IP65 standard.

Sight tube connection is via a 2 inch BSP cap nut for the UVH6/WP, or 2 1/2 inch for the UVH7/WP.

Flame viewing in the UVH6/WP is via a 1inch synthetic quartz window, with the option of a 1inch lens for increased sensitivity (designated UVH6/WP/L). For further increased sensitivity, the UVH7/WP is fitted with a 2inch synthetic quartz lens.

The unit is supplied, as standard, fitted with an IP65 gland and 2m of armoured cable. Other lengths of cable, or cabling options (e.g. a flying plug/socket assembly) may be supplied to order.

OPERATIONAL DESCRIPTION

The unit contains an ultraviolet sensitive gas discharge tube supplied from a high-voltage AC supply. When UV radiation is incident on the electrodes within the cell, ionisation takes place, and a current flows. This ionisation is quenched every mains half-cycle, resulting in a theoretical maximum value of 100 ionisations per second (for 50 Hz mains frequency).

This current flow is processed within an electronic circuit, resulting in an output signal consisting of a stream of pulses.

The UV radiation from the flame is interrupted by a shutter mechanism at a rate of 1 Hz, resulting in periodic interruptions to the output pulse stream. This is the basis of the self-checking mechanism of the viewing head. The associated flame amplifiers are designed to detect these periodic interruptions in the output signal. Should an uninterrupted train of pulses be detected, this indicates a fault within the viewing head, typically a faulty UV detector cell, and the flame amplifiers respond to this accordingly by ceasing to indicate flame on.

Optionally, for situations where the UV signal from the flame may occasionally be unreliable, the UVH6/WP and UVH7/WP may be supplied with a silicon backup cell, sensitive to infra-red/visible-light flicker, for use with appropriate dual flame-amplifiers. Contact Elcontrol engineering for further information.



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TECHNICAL SPECIFICATION

Enclosure Material:	Cast Aluminium
Overall Dimensions:	W: 80 mm, H: 85 mm, D: 160 mm
Weight:	2 Kg approx.
Operating Temperature Range:	-40 to +85 °C
Operating Voltage	110V, 240V AC 50 Hz
Output Signal Current	Typically 5 mA DC into 10K load
Cell Life:	10,000 hours typical
Spectral Response:	190 - 270nm
Shutter Operating Frequency:	1 HZ

