



# FDS301 VISUAL FLAME DETECTOR

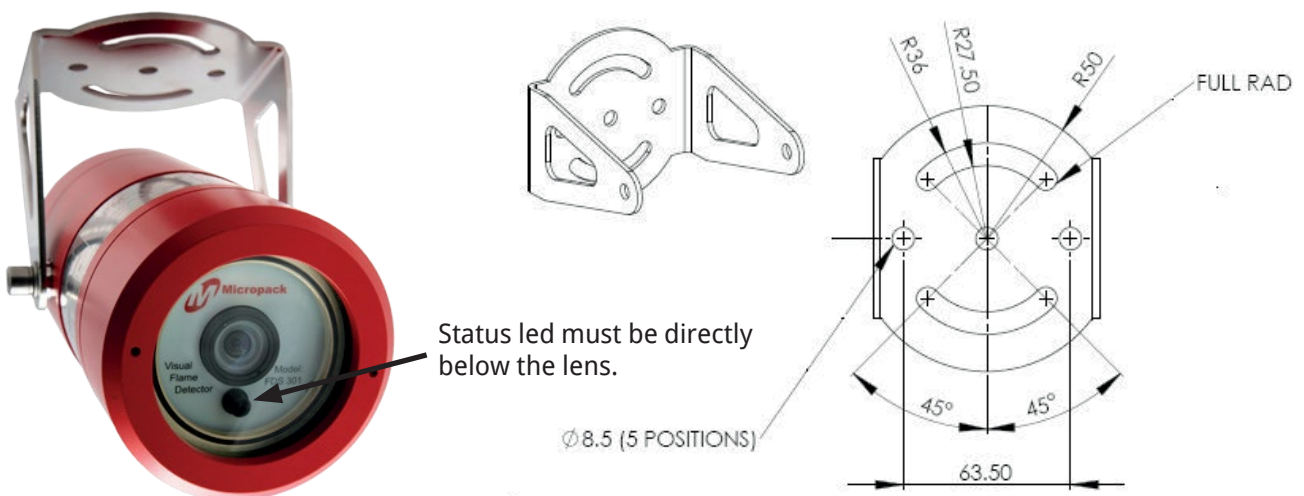
Ref - 2401.6010 Rev - 2.1 ECN #4614

## Mechanical Installation Guide

Listed below are installation guidelines for trouble free operation of optical systems.

1. The detector should be attached to comparatively rigid, vibration free mountings.
2. The detector orientation shall be as detailed in **figure 1** below to ensure:
  - a. The IP rating of the detector is not affected.
  - b. The 90° horizontal field of view is maintained.
  - c. The video aspect output is correct.
3. The front and rear enclosure covers shall be fully screwed onto the enclosure body and the grub screws tightened to ensure the hazardous area certification is maintained.
4. As with conventional video cameras the detector should not face directly towards the sun. In such conditions the detectors automatic exposure control will darken the image in order to avoid over exposure; the resulting picture may not be ideal for surveillance purposes. In the case of an offshore vessel or platform, the detector should ideally be placed facing inwards towards the plant and with minimal view of the horizon.

**Figure 1: FDS301 Orientation**





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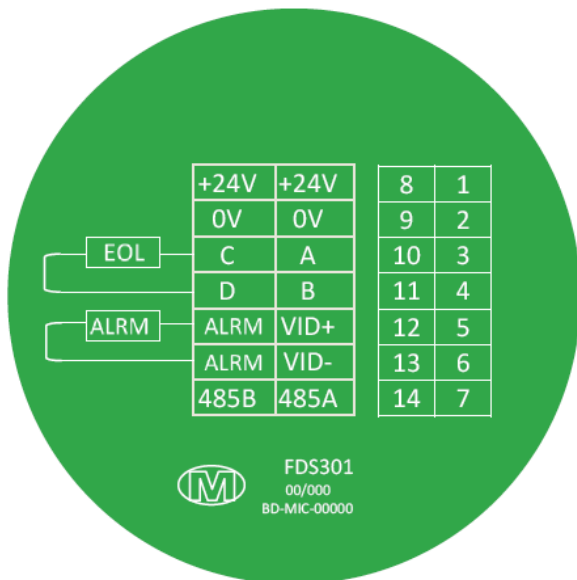
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## Electrical Installation Guide

The wiring terminals are located in the rear section of the detector enclosure and are accessible by removal of the end cap.

1. The detector enclosure is to be connected to a local earth and the detector cable screens (shields) should be cut back to the crotch and not terminated within the detector.
2. The terminal schematic (figure 2) detailed below shows the view looking inside the detector following removal of the end cap.
3. The detector can be configured for two types of alarm output:
  - a. 4-20mA current source (option for alarm relay also available)
  - b. Standard Relay (Alarm & Fault)

**Figure 2: FDS301 Orientation**



If further details are required, full wiring details are available from: FDS301 SAFETY & TECHNICAL MANUAL – Ref: 2200.5009

**a. 4-20mA Configuration**

Terminal	Description	Terminal	Description
8	+24Vdc power	1	+24Vdc power
9	0V Power	2	0V Power
10 (C)	Not connected	3 (A)	Spare
11 (D)	Not connected	4 (B)	4-20mA Signal
12	Not connected	5	Video +
13	Not connected	6	Video -
14	RS485B (Comms)	7	RS485A (Comms)

**b. Standard Relay Configuration**

Terminal	Description	Terminal	Description
8	+24Vdc power	1	+24Vdc power
9	0V Power	2	0V Power
10 (C)	EOL Resistor	3 (A)	Relay
11 (D)	EOL Resistor	4 (B)	Relay
12	Alarm Resistor	5	Video +
13	Alarm Resistor	6	Video -
14	RS485B (Comms)	7	RS485A (Comms)