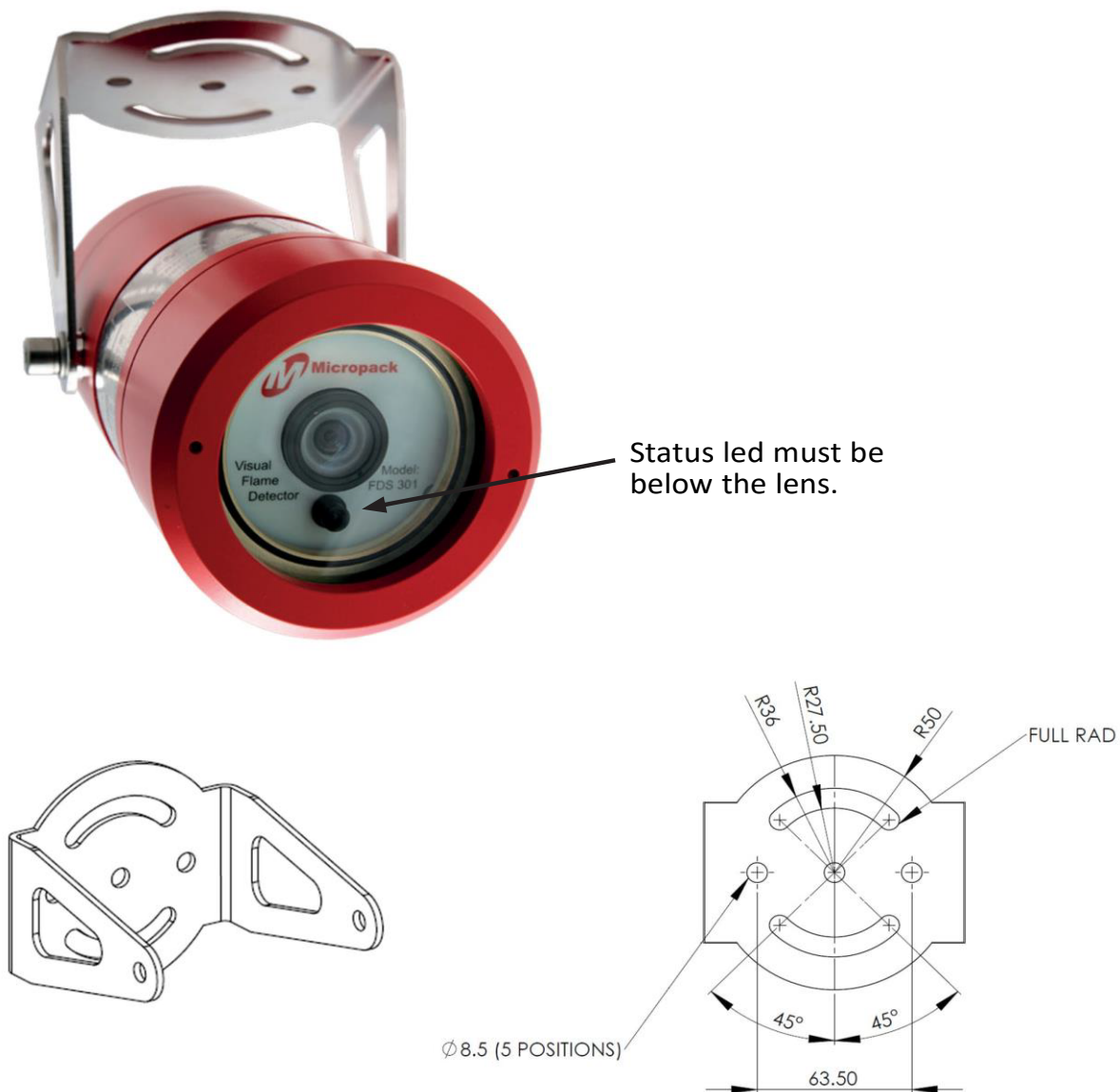


FDS301

Mounting and Orientation

The mounting bracket allows the detector's vertical orientation to be adjusted from 0 to 45°, and allows a horizontal rotation of +/-45°.

Figure 1: Detector Mounting Bracket & Orientation



ProDetec Pty. Ltd.

P. +61 (02) 9620 8700

E. info@prodetec.com.au

A. 17/38 Powers Rd, Seven Hills NSW 2147

PO. PO Box 3184,

North Parramatta BC, NSW 1750

www.prodetec.com.au



Est 2003

Figure 2: FDS301 Ceiling Mount

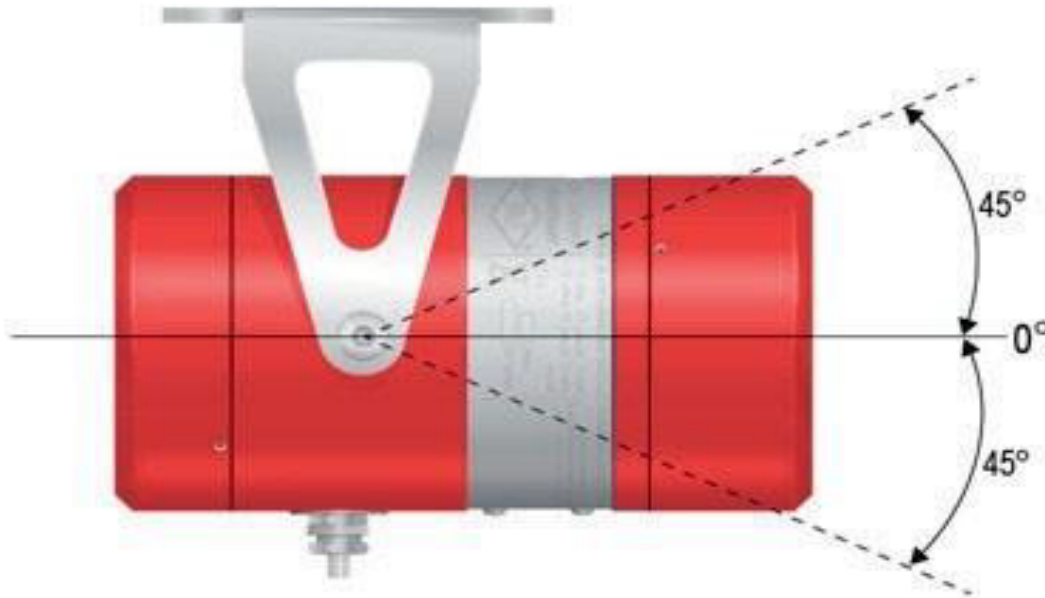
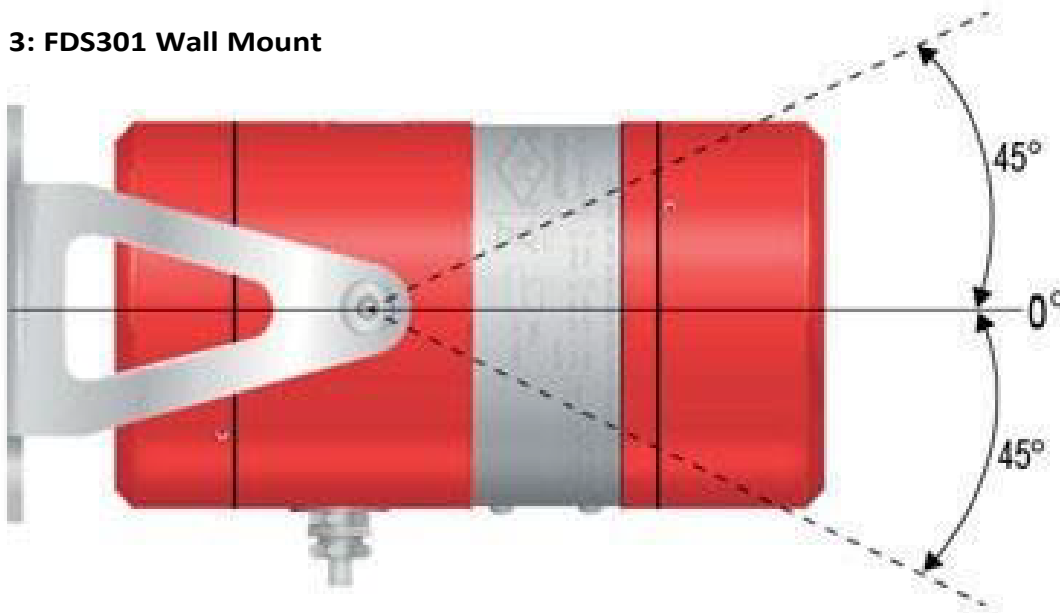


Figure 3: FDS301 Wall Mount



Firm, vibration free mountings are essential for trouble free operation of optical systems and the detector should be fixed to a rigid mounting. When mounting on a wall in this orientation allow for the cable gland and cable as this may restrict the downward rotation of the detector.

ProDetec Pty. Ltd.

P. +61 (02) 9620 8700

E. info@prodetec.com.au

A. 17/38 Powers Rd, Seven Hills NSW 2147

PO. PO Box 3184,

North Parramatta BC, NSW 1750

www.prodetec.com.au



Est 2003

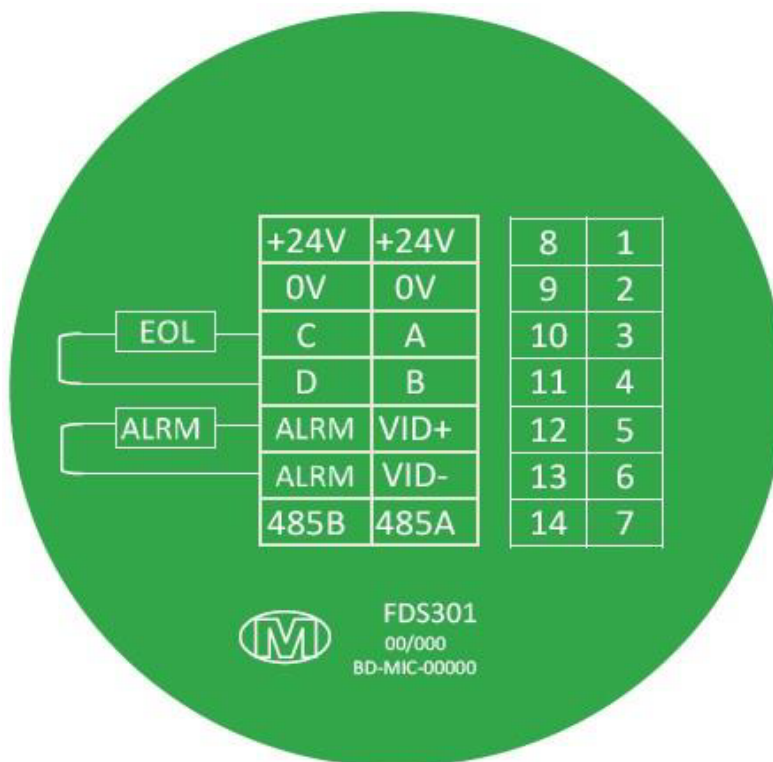
Wiring Procedure

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

The front section of the enclosure should only be accessed by trained personnel.

The terminal schematic (figure 4) detailed below shows the view looking inside the detector following removal of the end cap. The terminals are shown numbered to the right of the drawing.

Figure 4: Terminal Schematic



The detector has two types of alarm output available simultaneously

4-20mA (source)

Relay (Alarm & Fault)

Listed below are wiring options dependent on the functional requirements of the detector.

Note: Information below describes how to access RS485 communication by reversing the polarity of the power when there is no dedicated RS485 pair. This operation will disable the signal return to the control system whilst enabled. Care should be taken after using this facility to return the detector to normal operation.

ProDetec Pty. Ltd.

P. +61 (02) 9620 8700

E. info@prodetec.com.au

A. 17/38 Powers Rd, Seven Hills NSW 2147

PO. PO Box 3184,

North Parramatta BC, NSW 1750

www.prodetec.com.au



Est 2003

4-20mA Output

The following wiring connection diagrams show options for wiring the detector when configured in 4-20mA mode.

Figure 5: 3 Pair Termination

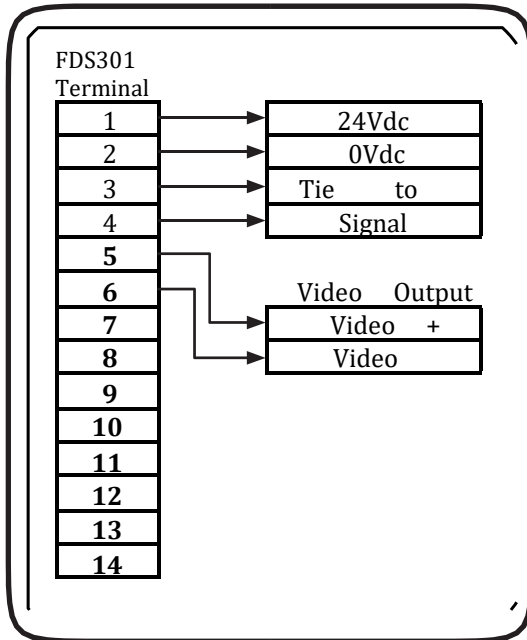


Figure 6: 2 Pair Termination

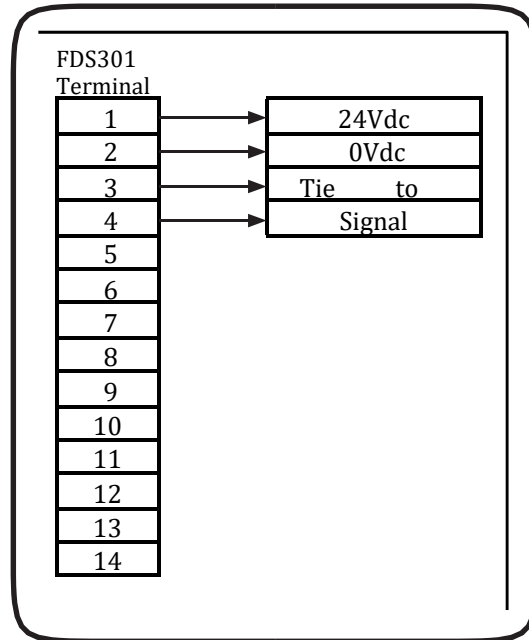


Figure 7: 3 Wire Termination

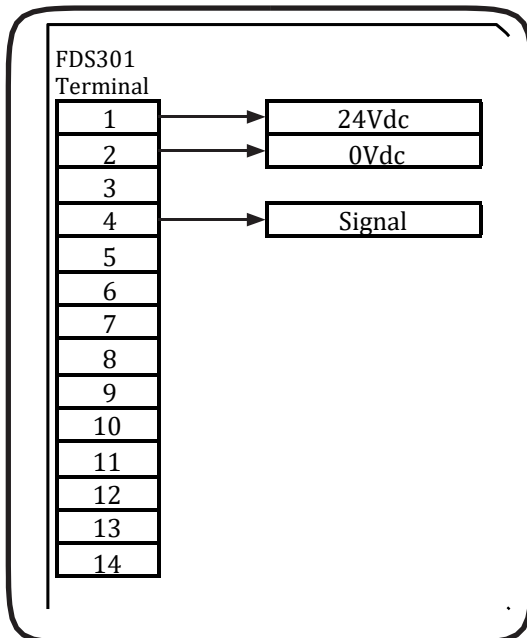
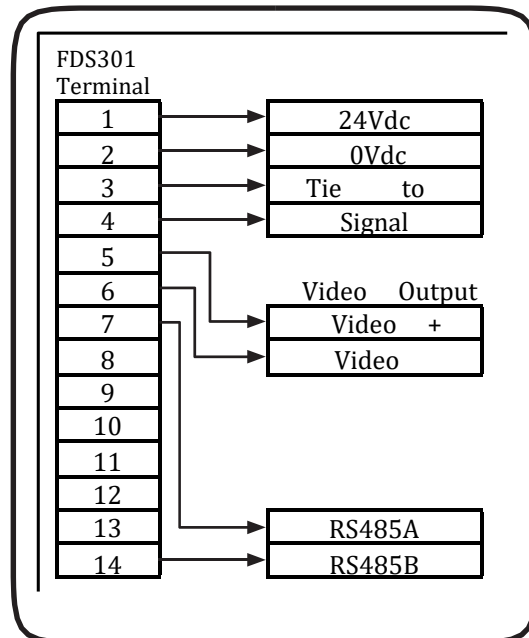


Figure 8: 4 Pair Termination



ProDetec Pty. Ltd.

P. +61 (02) 9620 8700

E. info@prodetec.com.au

A. 17/38 Powers Rd, Seven Hills NSW 2147

PO. PO Box 3184,

North Parramatta BC, NSW 1750

*Tied to spare terminal at control panel to allow RS485 communication with detector.

Information for wiring in the 4-20mA mode listed in figures 5 to 8 on previous page:

3 Pair Termination: Fully functional detector with continuous video and 4-20mA alarm output. Reversal of polarity across terminals 1 & 2 will enable Micropack RS485 communication.

2 Pair Termination: 4-20mA output only with reversal of polarity across terminals 1 & 2 enabling Micropack RS485 communication.

3 Wire Termination: Retrofit application where only 3 wires are available.

4 Pair Termination: Fully functional detector with continuous video, 4-20mA alarm output and connected Micropack RS485 communication.

Micropack RS485 communication should only be accessed by trained personnel.

Table 1: Current Level Output Indicators – Default Factory Values

Current Output	Event
<1.0mA	Power/Detector Fault
1.0 - 3.0mA	Optical Fault
4 - 7mA	Healthy
16 - 19.5mA	Alarm
>19.5mA	Fault (over-range)

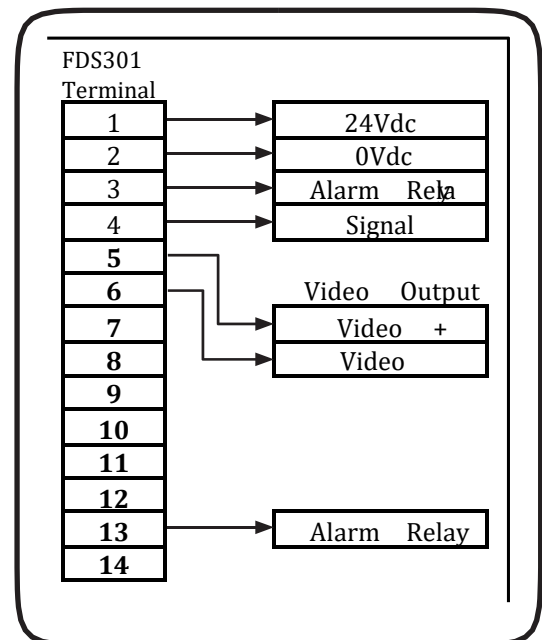
Alarm Relay

A further feature of the FDS301 flame detector when configured in 4-20mA mode is that an alarm relay is available if required. The alarm relay contact closes on alarm and can be employed by connecting to terminals 3 and 13 of the device.

RS 485

It is highly recommended to always connect terminals 3 and 4 back to equipment room marshalling cabinet with the use of a twisted pair cable. This allow access to the RS485 from the safe area.

Figure 9: 4 Pair Termination with relay



ProDetec Pty. Ltd.

P. +61 (02) 9620 8700

E. info@prodetec.com.au

A. 17/38 Powers Rd, Seven Hills NSW 2147

PO. PO Box 3184,

North Parramatta BC, NSW 1750

Relay Mode

The following wiring connection diagrams show options for wiring the detector when configured in relay mode.

Figure 10: 3 Pair Termination

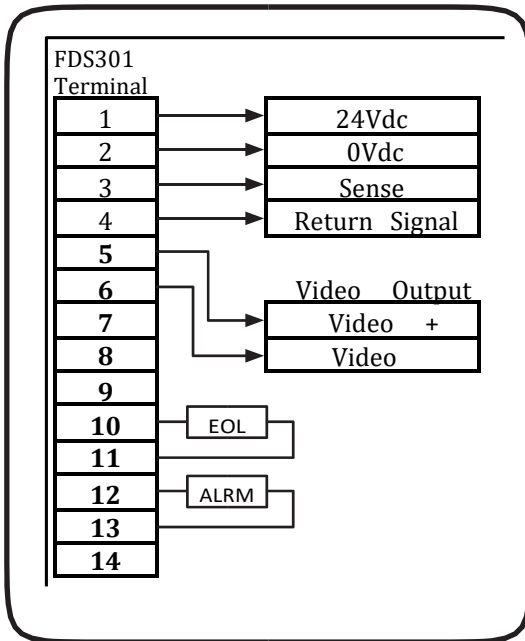


Figure 11: 2 Pair Termination

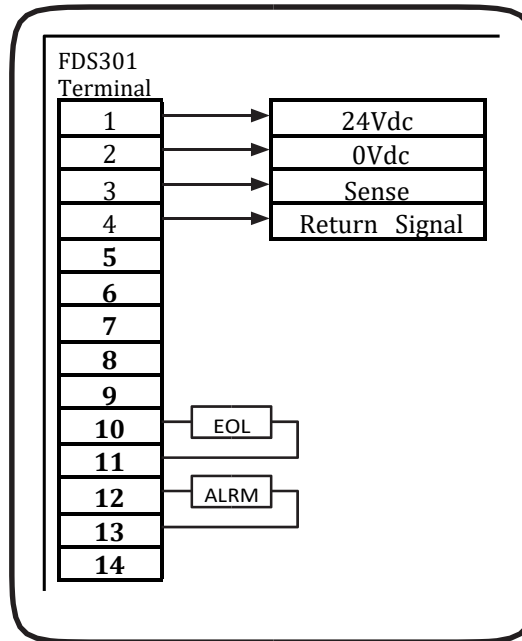
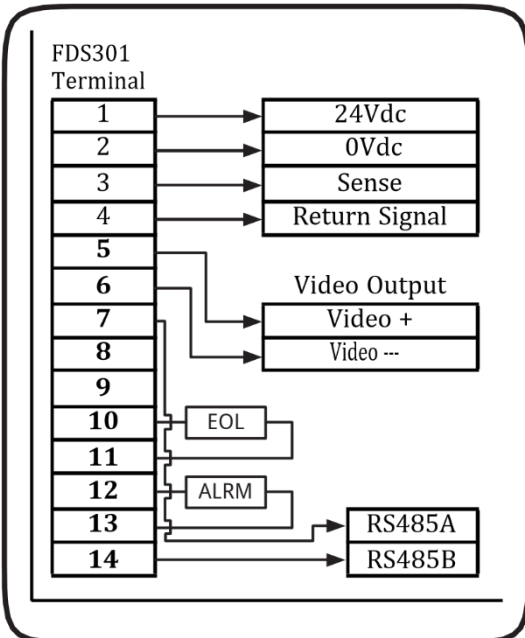


Figure 12: 4 Pair Termination



Information for wiring in relay mode figures 10-12:

- 3 Pair Termination: Fully functional detector providing continuous video as well as alarm and fault relays. Reversal of polarity across terminals 1 & 2 will enable Micropack RS485 communication.
- 2 Pair Termination: Alarm and Fault relay only with reversal of polarity across terminals 1 & 2 enabling Micropack RS485 communication.
- 4 Pair Termination: Fully functional detector with continuous video, alarm and fault relays as well as permanent Micropack RS485 communication connections.

Micropack RS485 communication should only be accessed by trained personnel.

EOL and Alarm resistor values defined by the client and the control system which the detectors are being integrated into.

ProDetec Pty. Ltd.

P. +61 (02) 9620 8700

E. info@prodetec.com.au

A. 17/38 Powers Rd, Seven Hills NSW 2147

PO. PO Box 3184,

North Parramatta BC, NSW 1750