

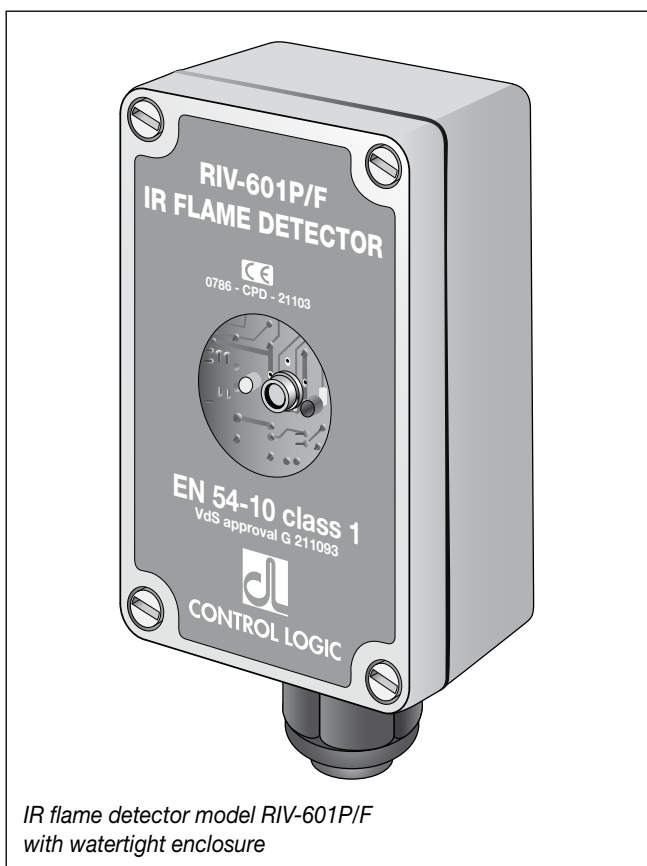
## IR FLAME DETECTOR RIV-601P/F

### DESCRIPTION

The IR flame detector model RIV-601P/F is an electronic optical fire detecting device which responds immediately to the thermal infrared radiation emitted by fire and is tuned to the flickering frequency of the flame to ignore sun and lamp light.

It is enclosed in a cast aluminium **watertight case** with **IP66** grade protection, which allows to withstand dusty environment and rain.

An **IP66 explosion-proof enclosure** is provided for the RIV-601P/FA model.



Nominal 24Vdc input power is required, with wide span allowed, and two different outputs are provided: one heavy changeover relay contact, and one NPN transistor open collector. Both outputs go into alarm state after a pre-set time delay, but they come back to the stand-by state as soon as the fire stops. The delay time is normally set to 5 seconds, but can be set in the range from 1 to 10 seconds. A protection against the 24Vdc power voltage inversion is provided. Sensitivity is 2-3% of the distance, that means a 10cm flame at 5m distance, or a 20cm flame at 10m. The field of view is a 90° cone, but beyond 90° the detector can see with reduced sensitivity, and can also see behind obstacles due to reflections.

A small dust build-up over the detector window does not decrease too much the detector ability, since thermal infrared radiation is little attenuated by dust, much less than light is. Therefore a frequent window cleaning is not required.

Also smoke does not blind the detector, which is operating well with fires in heavy smoke.

It is equipped with the “**teletest**” device for remote monitoring of detector.

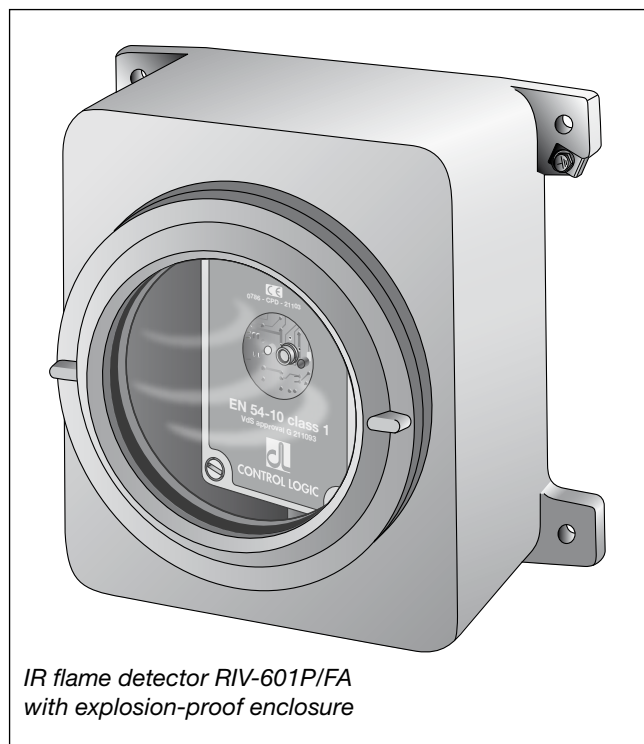
This device simulates a flame inside the detector so as to stimulate a sensor response like to a real fire.

The teletest device includes an incandescent bulb and a modulator circuit that generates a pulsating thermal infrared radiation in front of the sensor.

The teletest can be manually controlled from a remote site, or it can be automatic and continuously running.

The detector response to the teletest is a short alarm pulse of half a second every 4 seconds during all the period the teletest is operated. These short pulses can be recognised by the control panel as a state of live stand-by, since the real fire alarm is continuous. If pulses stop, this means a detector failure or the power voltage is off.

A front red LED lamp will signal the detector stand-by or alarm state.



Normally the detector is installed vertically, centred on the area to be covered, so as the 90° cone field of view can be fully used. The ideal height is 0.7 the side of the square area.

For instance, if side is 10m, then height is 7m and maximum viewing distance is 10m.

If ceiling is lower, corners are the ideal alternative.

In this case the height can be one third of the side.

Direct viewing of sun and bright lamps must be avoided, since this can blind the detector.

In outdoor applications a small hood or roof will help.

Vibrating or oscillating mounting must be avoided, since this can be a cause of false alarms.