

INTERTECHNIQUE

F0553

LEVEL DETECTOR

P/N

722105-2

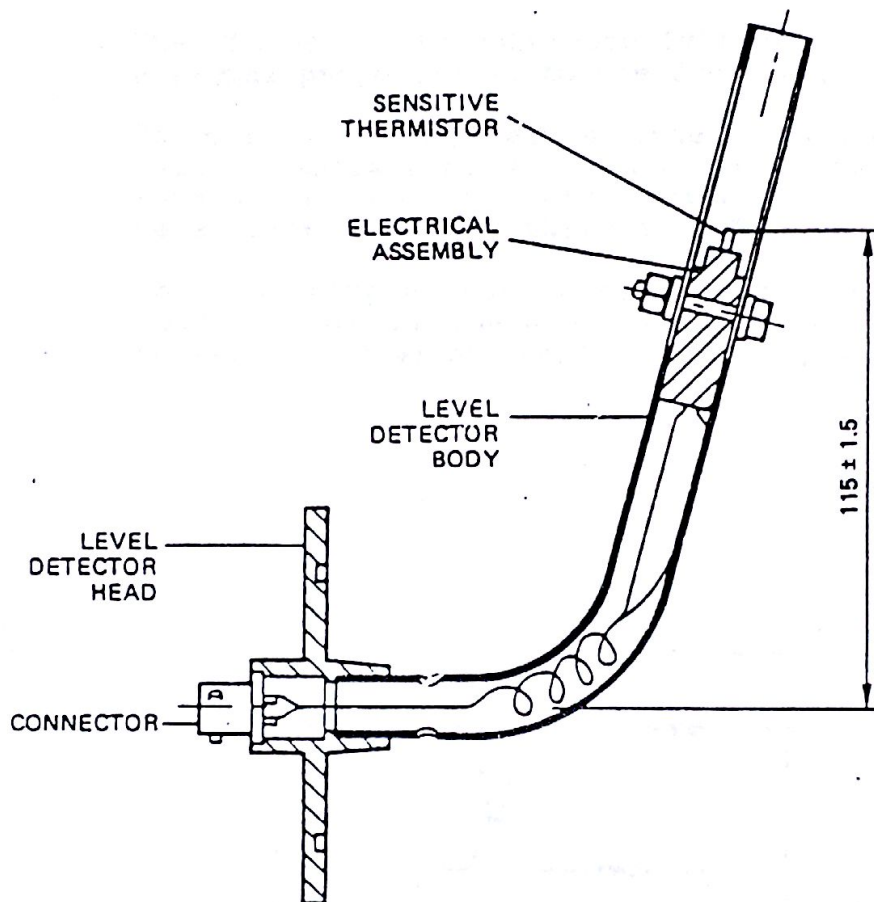
TECHNICAL DATA SHEET

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NOTE : ALL DIMENSIONS ARE IN mm.

GENERAL VIEW
FIGURE 1

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The upper end of the level detector body is provided with two apertures used to adjust the thermistor position to suit the level detector type.

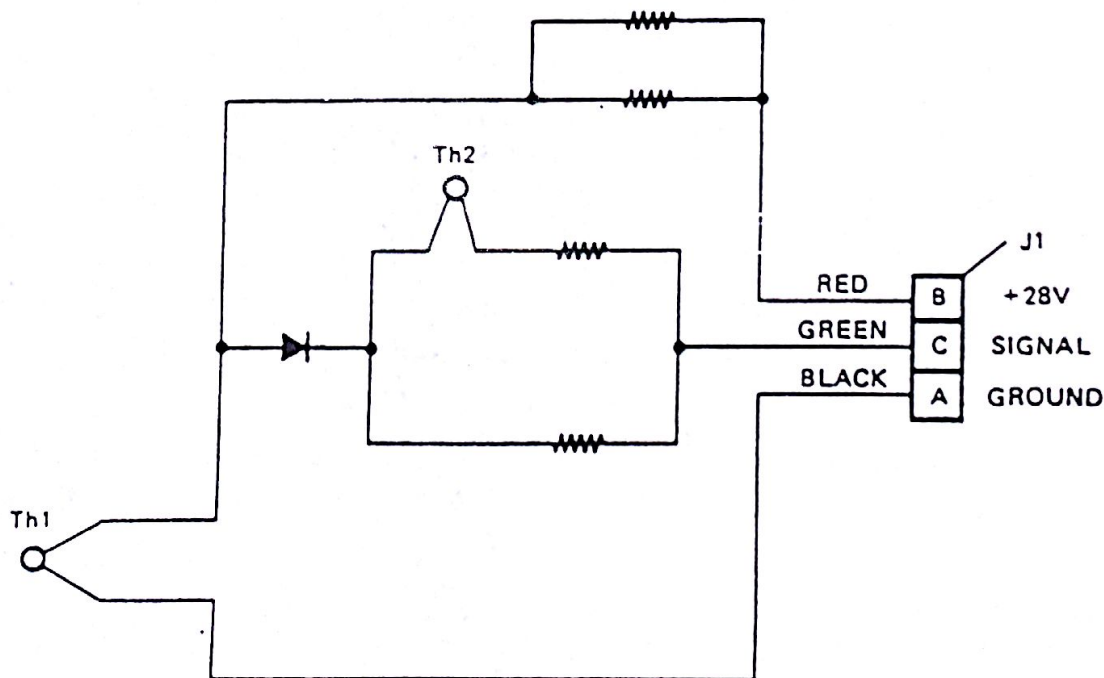
D. Operation (See Fig. 2)

Positive 28 V DC voltage is supplied to pins A and B of connector J1.

Thermistor Th1 is continuously immersed in fuel to deliver a signal proportional to the fuel temperature.

As the fuel temperature itself depends on the ambient (air) temperature, a second thermistor Th2 continuously senses the ambient (air) temperature to compensate the measurement taken by thermistor Th1.

The resulting output voltage across terminals A and C of connector J1 is therefore proportional to the difference between the fuel and ambient air temperatures.



SCHEMATIC DIAGRAM
FIGURE 2

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RELAY BOX

P/N

722233-1

COMPONENT MAINTENANCE MANUAL

WITH

ILLUSTRATED PARTS LIST

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DESCRIPTION AND OPERATION

1. General

Via an indicator light, relay box 722233-1 (connected to the fuel tank contents gauges), provides the pilot with an indication that the quantity of fuel remaining is less than a specified quantity.

A. Overall dimensions and weight

- Length : 148 mm (5.82 in.)
- Width : 56.5 mm (2.22 in.)
- Height : 77.5 mm (3.05 in.)
- Weight : 330 g (0.727 lb)

B. Characteristics

- Electrical power supply : 28 V DC
- Electrical connection :
 - through plug 54125, type 12-10S,
 - through plug 54125, type 16-26S.

2. Description (See Fig. 1)

The relay box is in the shape of a rectangular box : it is closed at the front and the rear by covers, the front cover carrying two electrical receptacles for connection purposes.

The box assembly contains a functional assembly consisting of three printed circuit board (PCB) assemblies (PL1 to PL3) which are held together by spacers and secured to the front and rear covers.

3. Operation (See Fig. 2 and 3)

Relay box 722233-1 has three channels whose operation is identical. The operation of the first two channels is checked by a low level test, while operation of the third channel is checked by a high level test. Each channel is contained upon a printed circuit board assembly (PL1 to PL3).

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The sensing element is a resistive dividing bridge. When exposed to the air, the bridge becomes warm and its resistance decreases (negative temperature coefficient) and the voltage across its terminals is then too low to turn on transistor Q3.

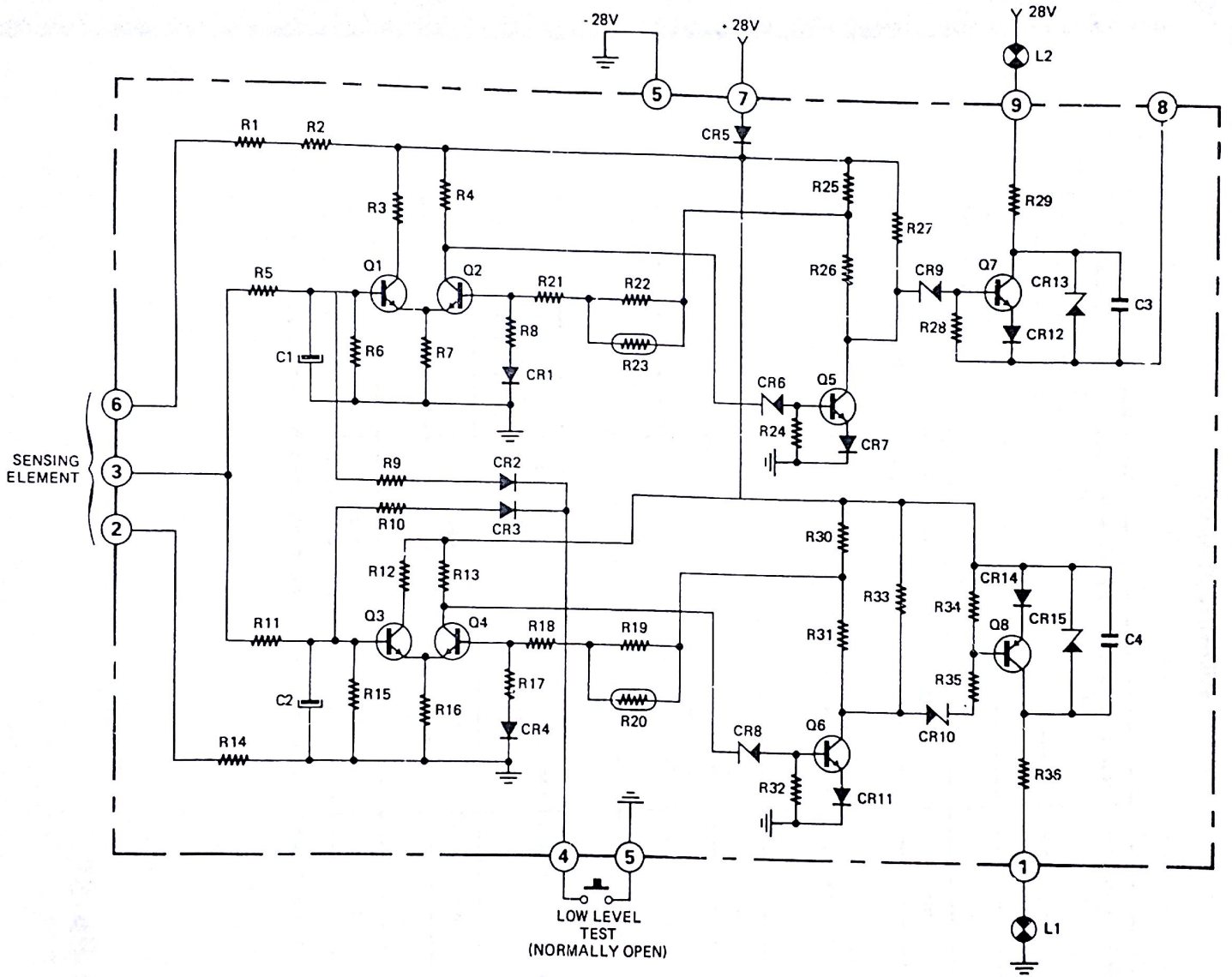
Transistor Q4, which has a temperature-compensated reference voltage circuit connected to its base (varistor R20), conducts. Transistors Q6 and Q8 are turned off and indicator light L1 is off.

Operation is identical for transistors Q1, Q2 and Q5. Transistor Q7 is turned on and indicator light L2 comes on.

When the thermistor is immersed in fuel, it becomes cooler, the voltage across its terminals rises, transistor Q3 turns on, transistor Q4 turns off, transistors Q6 and Q8 turn on and indicator light L1 comes on.

Operation is identical for transistors Q1, Q2 and Q5. Transistor Q7 is turned off and indicator light L2 goes off.

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CIRCUIT DIAGRAM

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Detector 1 Pins A, B, C of 10-pin receptacle	Low level test pin T	Indicator light L6	Indicator light L5
Air	Open	Off	On
Kerosene	Open	On	Off
Kerosene	Closed	Off	On

Detector 2 Pins A, B, C of 26-pin receptacle	Low level test pin V	Indicator light L2	Indicator light L1
Air	Open	Off	On
Kerosene	Open	On	Off
Kerosene	Closed	Off	On

Detector 3 Pins D, E, F of 26-pin receptacle	Low level test pin <u>b</u>	Indicator light L4	Indicator light L3
Air	Closed	Off	On
Kerosene	Closed	On	Off
Air	Open	On	Off

- Check that the indications remain the same with input voltages of 22 and 30 V.

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