Model BB-4 Capacitive Water Detector

Installation & setting up Instructions

The BB-4 Water Detector comprises a sealed blue polypropylene tube, containing the sensor, attached to an ABS termination head. A 1¼'' BSP stainless steel thread provides the process connection. Special models are available for difficult applications.

The termination head carries the limit relay, LED indicator sensitivity potentiometer, and connection terminals.

Both the power supply and volt-free relay connections are made to terminal blocks inside the termination head.

Operational check

1) Connect power to the power supply terminals (see specification for details)
2) Water detection in non-conductive liquids: With the sensor tube immersed in 'dry' liquid (i.e. no free water present) the limit relay will be de-energised and the LED will be on. If it is seen to be energised, turn the adjustment potentiometer anticlockwise until it is de-energised. If the sensor tube is now immersed in 'wet' liquid (i.e. with some free water present) the limit relay will be energised and the LED will be off.
3) Water detection in air or gas: With the sensor tube immersed in 'dry' air or gas (i.e. no free water present) the limit relay will be de-energised, and the LED will be on. If it is seen to be energised, turn the adjustment potentiometer anticlockwise until it is de-energised. If the sensor tube is now immersed, or partly immersed, in water the limit relay will be energised and the LED will be off.

Setting the Sensitivity

With the sensor tube in a 'dry' condition (i.e. immersed in water-free non-conductive liquid, or in air or gas) turn the adjustment potentiometer fully anticlockwise to 'Min'. The limit relay should be de-energised and the LED fully on.

Immerse the sensor tube into what is regarded as a 'wet' condition for the application.

Rotate the adjustment potentiometer clockwise until the limit relay is energised and the LED is off. Rotate the potentiometer clockwise one more division as marked on the circuit board: this helps to prevent hunting and allows for slight variations in process conditions.

The unit is now calibrated for your application.

Changes in process conditions may require the sensitivity to be re-calibrated.

(Note that the LED will glow dimly as the limit point is approached. Switching takes place when the LED is either fully on or fully off.)

International Moisture Analysers (IMA) Limited
Parkwell House, Otley Road
Guiseley West Yorkshire, England LS20 2RD

Phone +44(0) 1943 878877
Fax +44(0) 1943 879988
e-mail sales@ima.co.uk
Web www.ima.co.uk

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SPECIFICATION:

Power Supply	15-30 Vdc or 12 Vac - reverse-polarity protected.	
Indicator Lamp	Light Emitting Diode (LED)	
Limit Relay	Coil	12 Vdc
	Contacts	1 set changeover
	Rating	5A at 250Vac
Operating Temperature	Sensor tube - Standard model	-17 to +80°C
	Sensor tube - Special model BB-4S	-17 to +200°C
	Termination Head	-17 to +80°C
Pressure rating	34 Bar maximum	
Environmental Protection	Termination Head	IP66
	Sensor Tube	IP68
Special Options	Apart from the high temperature version mentioned above, we can provide: Longer insertion lengths, up to 2 metres maximum. Special adjustable insertion length versions either 178-305mm or 178-610mm Heavy duty flange mounted version.	

IMA are specialists in moisture measurement of most kinds. The BB-4 is a low-cost switch for water detection, other products include:

Water-in-oil analysis from 0.1 to about 60% water. (Suitable for most non-conductive liquids)

Moisture measurement in air, gases and liquids from PPB (Parts per billion) levels to 100% relative humidity. Applications are many and varied.

Moisture measurement in solids, both spot check and continuous.

Water leak detection systems - used in building management systems, and many other applications.

IF IT'S MOISTURE- ASK IMA

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