

TECHNICAL DATA

FR37x Fuel Level Sensor with Feed & Return

FOZMULA
INNOVATION IN SENSORS



The **FR37x** range of Fuel Level Sensors are equipped with fuel feed and return pipes, removing the need for additional fuel extraction and filling connections and simplifying the fuel tank assembly and installation. Fozmula's capacitance technology means no moving parts and, as a result; improved accuracy and reliability compared to mechanical alternatives. This range has a modular design enabling a great deal of flexibility to provide customers with options to suit specific applications. In addition to the sensor probe length, fuel system designers can specify:

- Resistive output range
- Level alarm height
- 5 or 6 hole SAE mounting
- Feed and return tube lengths and designs
- Inlet and outlet connector types & sizes
- Breather type
- Suction pipe filter
- Electrical connection type

SPECIFICATION

Liquid Types

Liquids compatible with the construction materials, typically fuels, oils and water.

Dimensions

Length: Min. 150 mm, Max. 1,200 mm.
Mounting: 5 or 6-hole SAE.
Weight: 0.55 Kg (gauge length of 300 mm).

Materials

Header: Die-cast zinc alloy.
Wetted materials: Stainless steel, polypropylene, Viton™, PTFE.
Fuel connectors: Brass.
Feed & return tubes: Aluminium.

Electrical

Supply Voltage: 9-36 VDC.
Supply Current: 15 mA@12 VDC.
Supply Protection: Over voltage 80 VDC for 2 minutes.
Reverse polarity.

Connections: 4-off 500 mm long 18 AWG XLPE leads:

Red	Supply, V+
Black	Ground (0 V)
Green	Resistive output
White	Switch to ground

Outputs

Resistive: Any values between 0-501 Ω or 501-0 Ω (3 Ω Steps).
Resolution: 3 Ω .
Max. dissipation: 250 mW.
Alarm Output: Switch to ground. Max 100 mA.
High or low level between 7% and 90% of active gauge length.
Default setting: low level alarm at 12% of active gauge length.

Environmental Ratings

Designed to meet:

Ingress: IP67.
Operating Temp: -40 °C to 85 °C.
Max tank pressure: 1 bar.
EMC: Type approval in accordance with EN ISO 13766:2006.
Vibration: 500mm sensor to be type tested to 1.88 Grms BS EN 60068-2-4:1995.
Shock: 500 m·s⁻², 11 ms, BS EN 60068-2-27:1993.



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Since the suitability of these products depends upon a wide range of factors not in our control, Fozmula Limited expects and understands that you will conduct the testing and evaluation necessary to determine that these products are suitable for your application. Whilst every effort is made to ensure the above details are correct at the time of printing, Fozmula Limited reserves the right to make material changes, and or technical changes without notification.

8.6/57 Rev. 2

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Options

Fuel inlet/outlet:

<p>Ø 6.5 mm</p>	<p>Ø 8 mm</p>
<p>Ø 10 mm</p>	
<p>Ø 10 mm J2044 – Engine Supply</p>	<p>Ø 10 mm J2044 – Engine Return</p>
<p>Bespoke Other fittings with M16x1.5 thread and suitable sealing can be accommodated.</p>	

Electrical connector: The FR37x can be supplied with any suitable style of plug or receptacle.

Fuel filter: Fuel filter – 178 micron

Breather: Breather (standard shown below or specify any of the above inlet/outlet fittings) or blanking plug:

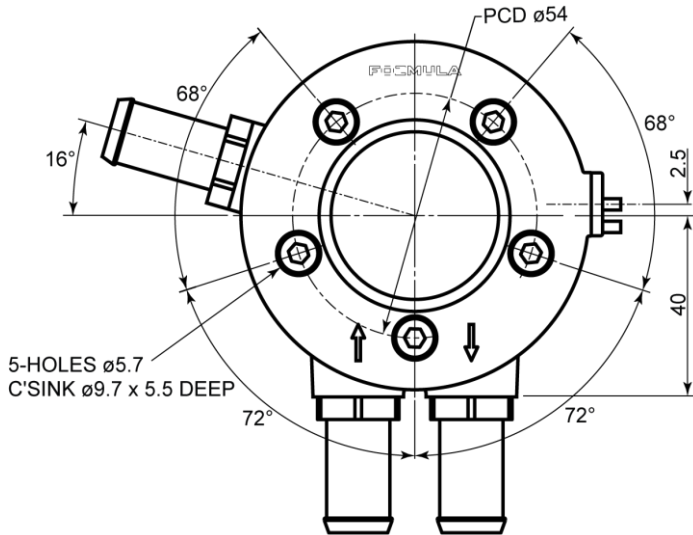
<p>Standard breather port is Ø 10 mm.</p>	<p>Blanking plug</p>
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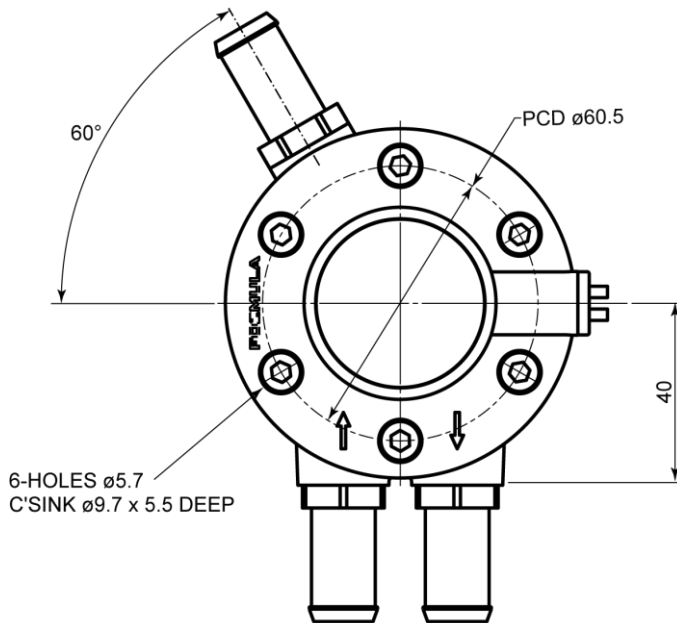
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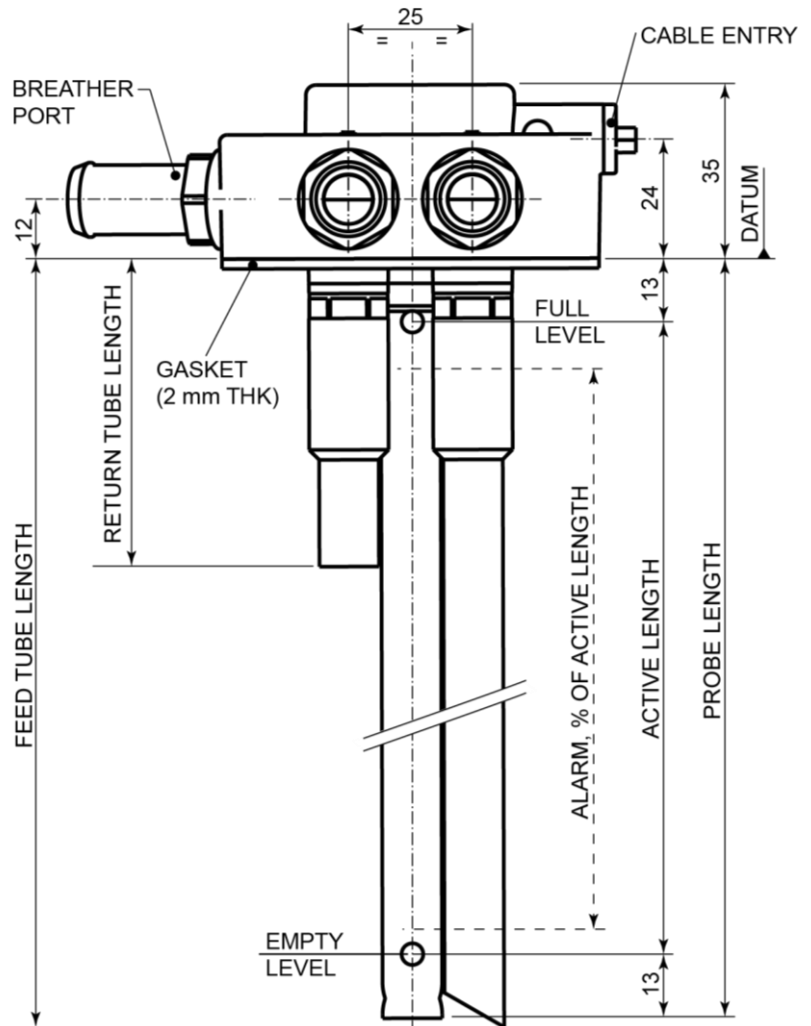
Installation drawings:



SAE 5-Hole Mounting



SAE 6-Hole Mounting



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