

The **Model T/LL140 series** is a range of highly advanced sensors for continuously measuring the contents of a fuel tank. Their main feature is that they auto-recalibrate when the fuel is at the full level and the sensor's electronics negate the effects of changes in the fuel's dielectric constant caused by the use of different fuels or percentage of additives being used. Additionally, the probe has the facility to fit fuel feed and return pipes (max  $\varnothing 10\text{mm}$ ) within the standard SAE 5 holes flange interface. Another useful facility is that the user can cut the sensor probe to length to suit the tank depth.

A low level alarm switches when the fuel drops below a predetermined level (default is 1/8<sup>th</sup> of the tank), but the alarm point can be optionally specified anywhere between 0-100%.

### Specification

#### Dimensions:

Probe length: Min 200mm, Max 1100mm (Min 7.9", Max 43.3")

#### Electrical:

Supply voltage: 12 or 24Vdc nominal

System frequency: 8kHz

Supply current:

Connections:

8mA@12Vdc + output load  
500mm long flying leads which can be optionally fitted with any specified receptacle

Accuracy:  $\pm 2.0\%$  of liquid height (-5°C to +60°C)  
 $\pm 3.0\%$  of liquid height (-20°C to +85°C) } for 500mm long probe

#### Outputs:

Resistive: One from: 10-180 $\Omega$ , 240-33 $\Omega$  or 3-180 $\Omega$  (Emulated resistive output)

Voltage: Selectable: 0-5V, 5-0V or any voltage range in between these limits (ascending or descending)

Alarm: Switch to ground at 1/8 tank depth - max load 100mA. Optionally adjustable between empty and full.

Warning Output Load: 100mA max.

#### Construction:

Housing: 30% glass filled Nylon 6

Sensor tube: Stainless steel 316

Internal insulators: PTFE

Internal sensor:

Wetted seals:

Epoxy resin coated FR4 fibre glass  
PTFE

#### Fluid Types:

Diesel, biodiesel, kerosene, petrol. Not suitable for fuels which contain >5% ethanol.

#### Environmental Ratings:

Temperature - operating: -40°C to +85°C (-40°F to +185°F)

- storage: -40°C to +105°C (-40°F to +221°F)

Max tank pressure: For use in unpressurized tanks

Vibration: BS EN 60068-2-64:1993 (15.3grms)

Sealing:

Shock:

Weight:

EMC:

IP67

50g 6.3ms

300g (1M long unit)

Type approval in accordance with EN ISO 13766:2006

Model	Output
T/LL140	Resistive
T/LL141	Voltage

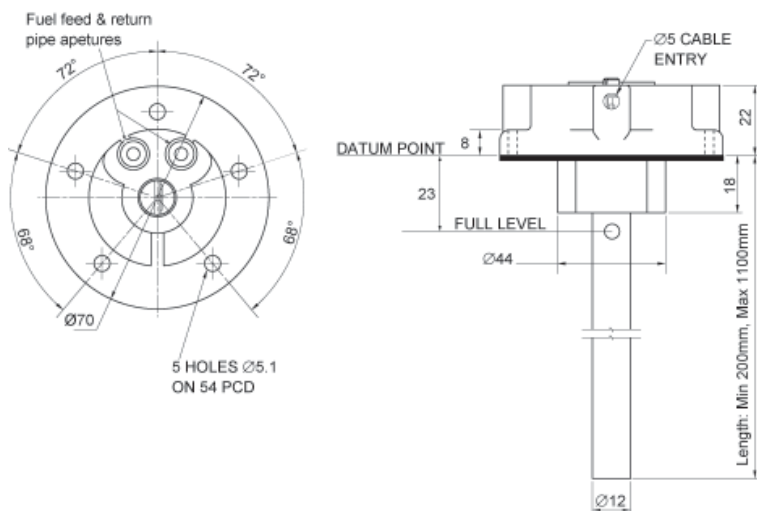
#### Wire colour codes:

Red: V+ (9 ~ 34V)

Green: V- (Ground)

Yellow: LLA max 100mA

Blue: Signal out ( $\Omega$  or V)



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