

## T/LL140 series fuel level sensor

The **Model T/LL140 series** is a range of highly advanced sensors for 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 10mm) 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 1000mm (Min 8", Max 40")

#### Electrical:

Supply voltage: 12 or 24Vdc nominal  
 System frequency: 8kHz  
 Accuracy:  $\pm 2.0\%$  of immersion depth @ 20°C

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

#### 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)  
 PWM: As specified. (Max vout load 15mA)  
 Alarm: Switch to ground at 1/8 tank depth - max load 100mA. Optionally adjustable between empty and full.  
 Warning Output Load: 100mA max.

#### Construction:

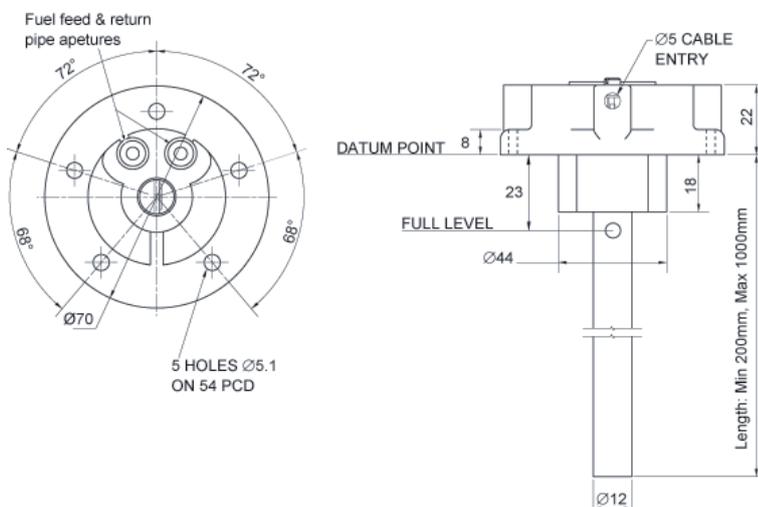
Housing: 30% glass filled Nylon 6  
 Sensor tube: Stainless steel 316  
 Internal insulators: PTFE  
 Internal sensor: Epoxy resin coated FR4 fibre glass  
 Wetted seals: PTFE

#### Fluid Types:

Fuels compatible with materials of construction

#### Environmental Ratings:

Temperature - operating: -40°C to +85°C (-4°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: IP67  
 Shock: 50g 6.3mS  
 Weight: 300g (1M long unit)  
 EMC: Type approval in accordance with EN ISO 13766:2006



Model	Output
T/LL140	Resistive
T/LL141	Voltage
T/LL142	PWM