

## TECHNICAL DATA

### S86 capacitance oil level switch

**FOZMULA**  
INNOVATION IN SENSORS



The **Model S86** is an active device which is designed to give an alarm signal if fluid falls below a preset level. It will only signal an alarm after a few seconds of low level to eliminate false alarms due to turbulence.

Containing a programmable microprocessor, the switch can offer one or two output pins which can sink to ground or supply a source voltage, or both. Its tiny footprint with limited intrusion into the tank means a reduced risk of damage and a wide range of options and customisations makes it suitable for most applications.

## SPECIFICATION

### Electrical Rating

**Supply Voltage:** 5 VDC or 7 - 35 VDC  
**Supply Current:** 1.5mA + source output  
**Max. Load Current:** 1.0A (sink) or 20mA (source)  
**Alarm Delay Time:** 0 - 25 secs rising or falling (factory set)  
**Connection:** 4 way Delphi Packard connector  
**Start up Delay:** 1 - 5 secs

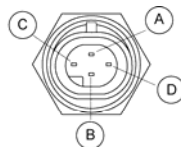
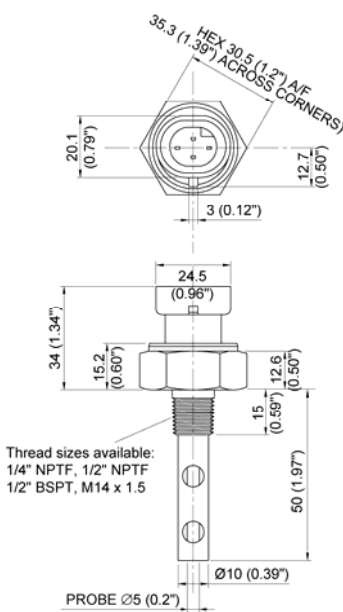
### Fluid Types

Mineral oils, typically used in engines or hydraulic actuators, compatible with Brass, PTFE and NBR rubber

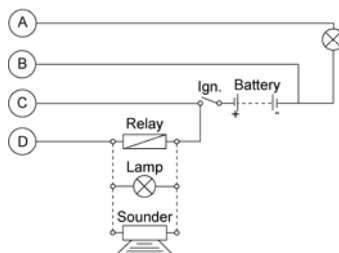
### Environmental Ratings

**Sealing:** IP67  
**Max. pressure:** 5.0 Bar (72 psi)  
**Temp. ranges:** Fluid: -40°C to +130°C (-40°F to + 266°F)  
 Storage: -40°C to +140°C (-40°F to + 266°F)  
**Weight:** 53g (2 oz)  
**EMC:** Type approval to EN ISO 13766:2006

Note: Torque setting on installation should not exceed 22Nm. Unit should be tightened with a 31mm ring spanner or 31mm socket.



A: Output 2 Source 5V or V+  
 B: GND Negative power supply or GND  
 C: V+ Positive power supply  
 D: Output 1 Transistor switched to GND (Sink)  
 Body Not connected



### Construction

**Body:** Brass  
**Probe:** PTFE  
**Terminals:** SAE CA210Brass, Tin Plated  
**Seals:** NBR rubber  
**Connector:** 30% Glass Filled Nylon 6



### Connections

See diagram below  
 Note: Outputs are factory selectable and dual outputs on output 1 are available on request.

### Vibration (15.3 grms)

3 orthogonal planes for 3 hours per plane

Frequency (Hz)	G2/Hz
24	0.4
60	0.5
100	0.5
240	0.1
2000	0.1

Testing performed in accordance with BSEN 60068-2-64:1993

### Optional accessories:

Mating connector kit to suit harness wire cross sectional area of 0.8 to 1.0mm<sup>2</sup> and sleeve Ø1.60 to 2.15mm:

**Our Part no** C/K1  
**Description**  
 Connector kit comprising of:  
 Crimp Terminals (x4)  
 Cable seals (x4)  
 Cavity plug (x1)  
 Connector assembly 4 way (x1)  
 TPA lock (x1)

From the Packard Metri-Pack 150 series of connectors.

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