

Technical Data - S85 coolant alarm switch

Description

The **Model S85** is an active device which is designed to give an alarm signal if fluid falls below or rises above a preset level. It will only signal after a few seconds delay in sensing the 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:

Water based fluids 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 Storage: -40°C to +140°C
Weight:	53g

Construction:

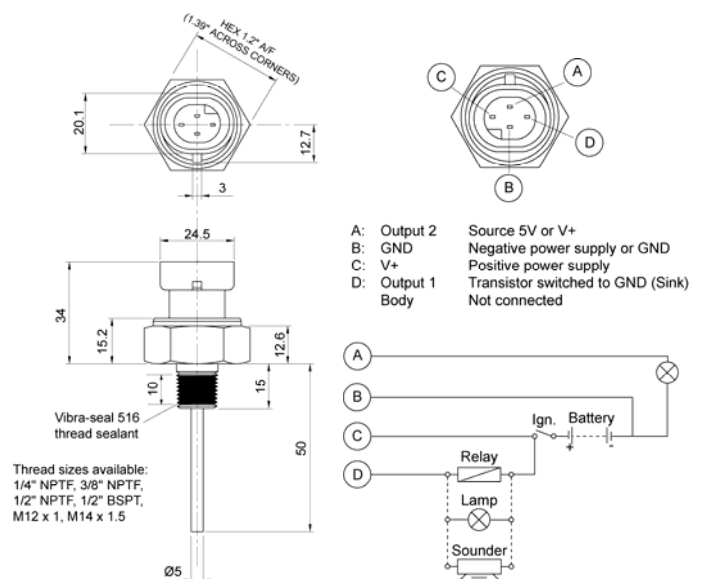
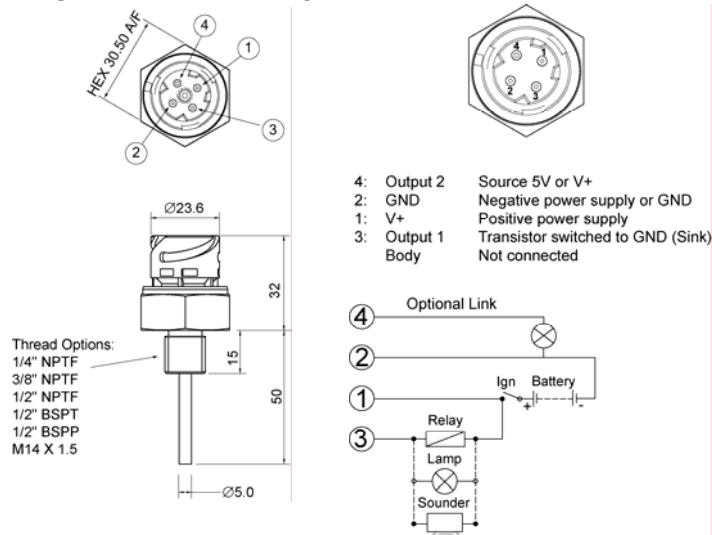
Body:	Brass
Probe:	PTFE
Terminals:	SAE CA210Brass, Tin Plated
Seals:	NBR rubber
Connector:	30% Glass Filled Nylon 6
Thread sealant:	Vibra-Seal 516



Connections:

See diagram below

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



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Product background

The **S85** series was introduced to the market over 10 years ago and since its inception over half a million sensors have been supplied proving it as a very robust and reliable product. It has now become an industry standard and is specified worldwide by many leading engine manufacturers including Perkins, Cummins and Caterpillar.

Test performance data

EMC: Type approval to EN ISO 13766:2006 for Narrowband Emissions, Broadband Emissions, Radiated Immunity, Transient Pulses & Electrostatic discharge.

Compliance to various customer specified Salt spray/fog tests.

Vibration (15.3 grms): Testing performed in accordance with BSEN 60068-2-64:1993.
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

Reliability Performance:

The current PPM figure is under 50PPM for warranty returns received from 2008 - 2010.

Optional accessories:

Mating connector kits to suit harness wire cross sectional area of 0.8 to 1.0mm² and sleeve \varnothing 1.60 to 2.15mm:

Our Part no	Description
C/K1	From the Packard Metri-Pack 150 series of connectors
C/K2	From the DIN 72 585 series of connectors

Special connectors such as MIL spec. or flying leads with customer's own connectors are available on request.

Reduced probe length versions are available subject to Fozmula Engineering Department approval.

Future Developments:

Available from late 2010 an **S 85** variant will be available in a dual output format to switch at:-
1.2 VDC in coolant.

4 VDC in Air.

It is planned to introduce an **S85** variant in all 316 stainless steel