

TECHNICAL DATA

S291 Coolant Level Switch – Capacitance Type with Complementary Voltage Output.

FOZMULA
INNOVATION IN SENSORS



The **S291** is an active device designed to give an alarm signal if liquid falls below, or rises above, a preset level. It can be specified with a delay to eliminate false alarms due to turbulence.

Containing a factory programmable microprocessor, the switch provides a complementary voltage output on two pins.

Its small footprint with limited intrusion into the tank means a reduced risk of damage and a wide range of customer specifiable options make it suitable for most applications.

The switch is designed to operate in both earthed metal and isolated plastic tanks. For high accuracy the S291 is ideally mounted horizontally at the point where an alarm or control signal is required. However, the switch can be mounted vertically – contact Fozmula with your application requirements

SPECIFICATION

Liquid types: Water based liquids such as coolant or washer fluid.

Electrical rating

Supply voltage:	5±0.25 VDC.	
Supply current:	5 mA + source output.	
Alarm delay time:	0 to 25 s rising or falling (factory set).	
Connection:	4 way Delphi Packard Metri-Pack 150 series connector.	
Power up delay:	0 to 10 s (factory set).	
Power up state:	'In Liquid' or 'Out of Liquid' (factory set).	
Output type:	Voltage (Complementary).	
Output pin:	Pin A.	Pin D.
Output state in liquid*:	4±0.25 VDC.	↔ 0.5±0.25 VDC.
Output state in air*:	0.5±0.25 VDC.	↔ 4±0.25 VDC.
Output current:	10 mA maximum.	10 mA maximum.

Connections: See diagram below.

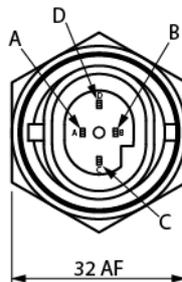
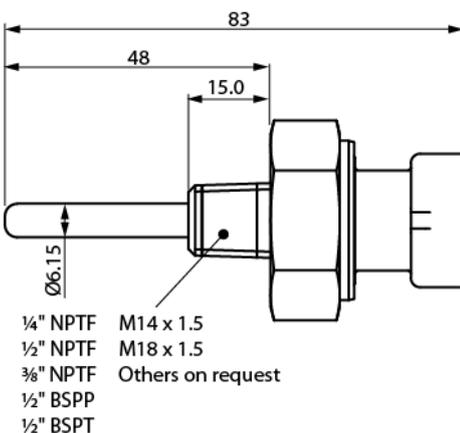
*Outputs are factory selectable; opposite states and alternative values from 0.5-4.5 VDC are available on request.

Environmental Ratings

Ingress:	IP67 (with mating connector fitted).
Max. pressure:	5.0 Bar (72 psi)
Temp. range:	-40 °C to +125 °C
Weight:	70 g typical (dependent on thread size)
EMC:	ISO13766:2006

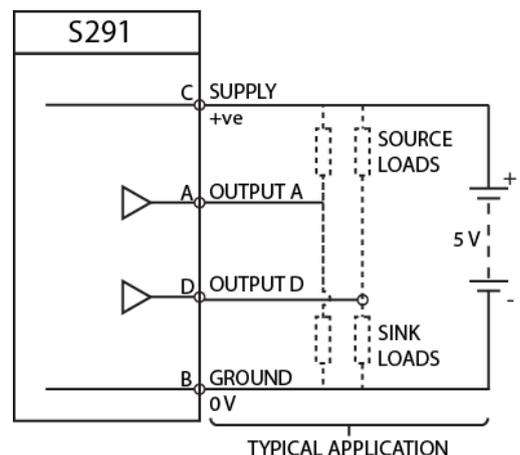
Construction

Body:	Brass.
Probe:	PTFE.
Terminals:	Brass, Tin Plated.
Seals:	EPDM & FVMQ.
Connector:	PA66 30% Glass Filled Nylon.
Thread sealant:	Vibra-Seal 516 (taper thread variants only).



Vibration (15.3 Grms)

3 orthogonal planes for 3 hours per plane
Testing performed in accordance with BSEN 60068-2-64:1993
Drop: 1 m to concrete surface.



Recommended Installation Tightening Torques:

1/4" NPTF	9 Nm	M14x1.5	10 Nm
3/8" NPTF	11 Nm	M18x1.5	15 Nm
1/2" NPTF	20 Nm		
1/2" BSPP	15 Nm		
1/2" BSPT	20 Nm		

Optional accessories

C/K1: Packard Metri-Pack 150 series mating connector kit to suit harness wire cross sectional area of 0.8 to 1.0 mm² and sleeve Ø1.60 to 2.15 mm.

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