

Engineering Innovative Solutions™

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



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 alarm 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 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 Rochester Sensors with your applications.





SPECIFICATION

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

Electrical rating Construction

Supply voltage: 5 ± 0.25 VDC.Body:Brass.Supply current:5 mA + source output.Probe:PTFE.

Alarm delay time:0 to 25 s rising or falling (factory set).Terminals:Brass, Tin Plated.Connection:4 way Delphi Packard Metri-Pack 150Seals:EPDM & FVMQ.

series connector. Connector: PA66 30% Glass Filled Nylon.

Power up delay: 0 to 10 s (factory set). **Thread sealant:** Vibra-Seal 516 (taper thread variants only). **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. $\leftrightarrow 0.5\pm0.25$ VDC.

Output state in air*: 0.5 ± 0.25 VDC. $\leftrightarrow 4\pm0.25$ 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: $-40 \, ^{\circ}\text{C}$ to $+125 \, ^{\circ}\text{C}$

Weight: 70 g typical (dependent on thread size)

EMC: ISO13766:2006

Vibration (15.3 Grms)

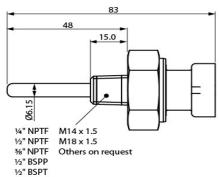
3 orthogonal planes for 3 hours per plane

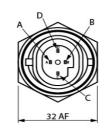
Testing performed in accordance with BSEN 60068-2-64:1993

Drop:

1 m to concrete surface.

C 2 0 1





5291					
c	SUPPLY				
Ĭ	+ve SOURCE				
>	OUTPUT A				
	OUTPUT D				
	SINK T				
	GROUND				
	0V				
TYPICAL APPLICATION					

Recommended Installation Tightening Torques

Necommended mistaliation rightening rorques.				
	1/4" NPTF	9 Nm	M14x1.5	10 Nm
	¾" NPTF	11 Nm	M18x1.5	15 Nm
	½" NPTF	20 Nm		
	½" BSPP	15 Nm		
	½" BSPT	20 Nm		

Optional Accessories:

C/K1: Packard Metri-Pack 150 series mating connector kit to suit 2 harness wire cross sectional area of 0.8 to 1.0 mm and sleeve \emptyset 1.60 to 2.15 mm.

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