

ATEX Rated Liquid Leak Detection Sensor Type AOSP



The AOSP sensor has been designed for hazardous environments and is ATEX, UKCA, IECEx certified. The sensor gives a NAMUR output and will detect the presents of any liquid including petrochemicals, water, fuel oil etc. The sensor is provided with a 316 Stainless Steel brackets with 0-5mm height adjustment and 10m long interface cable.

The mode of operation is the principle of total internal reflection. An LED and photo-transistor are housed in a polymer (Grilamid) dome. When no liquid is present, light from the LED is internally reflected from the dome to the photo-transistor. When a liquid covers the dome, the effective refractive index at the dome-oil boundary changes allowing some light from the LED to escape. Thus the amount of light received by the photo-transistor is reduced indicating the presents of a liquid.

Hazardous area certification



II 1 Ex ia T4 Ga (-30 to +80C)



Ex ia IIC T4 Ga (-30 to +80C)

Technical Speciation

Power supply		+5VDC TO 12VDC (+8.2v nominal)
Supply current		Liquid detected >3mA; dry <1mA
Output type		NAMUR
Sensor tip		Grilamid
Operating temperature		-30 to +80 °C, -22 °F to +176 °F
Storage temperature		-40 to 80 °C, -40 °F to +176 °F
Pressure		Maximum 32 Bar, 464 psi
Housing material		316 Stainless steel

This product requires a suitably rated galvanic barrier with NAMUR input and volt free contact output.

ATEX rated Barrier

Type AOSP-B



The galvanic barrier requires a 15 to 24VDC supply to power both itself and the sensor. The unit has an isolation amplifier that is designed to interface with NAMUR sensors and isolates high DC (direct current) levels from the sensor. If an error occurs in the unit, the LED (light-emitting diode) indicator will illuminate to let you know. There's also an indicator that signals supply voltage and switching state, making it simple to use. The device has three-way isolation, while preventing short circuit hazards and current interference for greater safety and efficiency.

The barrier is built for use with proximity sensors and switches in explosive atmospheres. It can also be used in other monitoring applications such as laboratory testing, technical measurements and medical equipment.

Features & Benefits

- ATEX hazardous area certification for use in potentially explosive environments
- Broad operating temperature range of -20°C to +60°C for use in demanding conditions
- Relay contacts are gold-plated to prevent corrosion for long-lasting performance

Group and Category

ATEX 2 II (1) G [Ex ia Ga] IIC 2 II (1) D [Ex ia Da] IIIC IECEx [Ex ia Ga] IIC [Ex ia Da] IIIC Ex nA nC IIC T4 Gc UL, USA / Canada Class I Div 2; IS for Class I, II, III Div 1

Technical Specification

Power supply		+15VDC TO 30VDC
Maximum current		10mA
Input signal		NAMUR
Barrier type		Galvanic
Operating temperature		-20 to +60 °C
Maximum contact voltage		125VDC (0.2A), 253VAC (2A)
Pressure		Maximum 32 Bar, 464 psi
Mounting		Din rail mounting