

# H2-LEAKAGE Sensor

## for hydrogen driven vehicles



Vehicles with hydrogen drives require a safety concept at the highest level. In particular, the detection of a leak in the hydrogen supply is an essential element in the careful handling of the critical medium hydrogen. AST's H2-Leakage Sensor based on the TCS process (patent pending) with its robust measuring principle fulfills this requirement perfectly.



- High sensitivity for H2
- Robust measuring principle
- Long term stability
- Low cross sensitivity to other gases
- Fast response time
- Customized housing geometry possible
- ASIL B qualified

The measuring principle of the H2-Leakage sensor is based on the measurement of the thermal conductivity of the surroundings of the sensor element. Since hydrogen has a thermal conductivity that is approx. 10 times higher than that of the gases found in normal ambient air,



this sensor principle is very sensitive to hydrogen. The patent-pending TCS process uses a thin nickel wire as a sensor element to determine the thermal conductivity. The sensor is qualified according ASIL B.

### Technical data:

Measuring range	0-10 vol-% of H2 in air
Measurement accuracy (lifetime)	± 0.1 vol-% of H2 in air
Response Time	1 s
Operating Temperature	-40°C to +105°C
Humidity	0-100% rel.
Safety Level	ASIL B
Ingress Protection	IP6K9K
Interface	CAN2.0 500kBaud

AST International is a leading provider of customized sensors and controls for automotive, domestic appliance, and industrial applications. Our products stand out on account of their cutting-edge sensor technology, best quality and reliability.



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