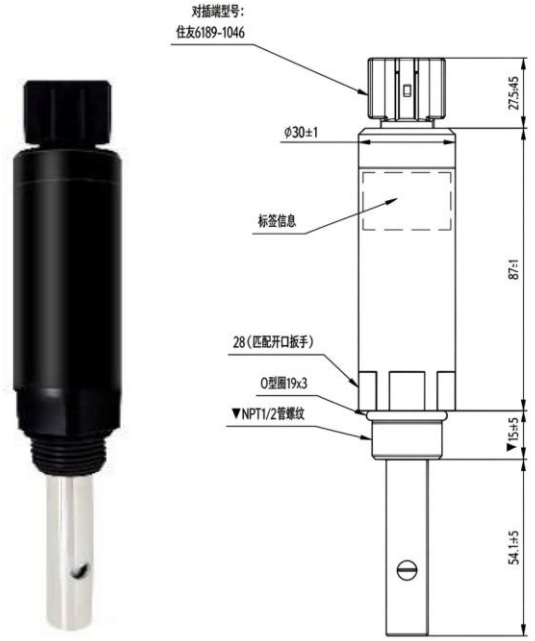
Online Conductivity Sensor

Inline coolant conductivity monitoring for fuel-cell systems

A conductivity sensor for hydrogen fuel-cell engines, vehicle thermal management systems and related liquid monitoring. It measures conductivity by excitation at both electrode ends and reports a direct digital reading over CAN, keeping the coolant within the limits the stack requires.



Key features

Model	ZW-HC101
Detection range	0 – 20 µS/cm
Resolution	0.1 µS/cm
Precision	± 1.5 % F.S.
Working temperature	−40 – +100 °C
Working pressure	< 0.6 MPa
Power supply	DC 24 V (18 – 32 V)
Power consumption	≤ 0.3 W
Signal output	CAN
Liquid material	SUS 316L
Protection grade	IP68 / IP6K9K
Weight	150 ± 10 g
Installation	M22 × 1.5 / NPT 1/2 pipe

Technical highlights

Intelligent algorithm

Built-in automotive-grade intelligent chip with high-precision circuitry and software algorithms, giving a direct digital output of the conductivity reading.

Anti-electromagnetic interference

EMC-resistant design keeps the measurement stable next to the high-power electrical equipment of a fuel-cell vehicle.

Repeatability and stability

Excellent repeatability and stability over the service life, with a long service life built into the sensing element.

Automotive development

Developed per IATF 16949, with a design-verification report and a CNAS laboratory automotive-grade EMC certification.

Why conductivity monitoring matters

Ionic contamination

Dissolved ions raise coolant conductivity and accelerate corrosion of the metal stack and the cooling circuit itself.

Stack degradation

A contaminated loop shortens stack life, and the cost of replacing a stack far exceeds the cost of monitoring the coolant.

Early warning

Continuous CAN reporting lets the controller condition the coolant or derate the system before damage occurs.