

Fuel Cell & EV Coolant Electrical Conductivity Sensor (MI-Cond-02 / MI-Cond-03)

Online Coolant Conductivity & Temperature Transmitter for Hydrogen FCEV & EV Thermal Loops

Product Overview

In Hydrogen Fuel Cell Electric Vehicles (FCEV) and high-voltage EV battery cooling loops, low coolant electrical conductivity is critical to prevent high-voltage short circuits and galvanic corrosion. Misensor MI-Cond series continuously monitors both coolant conductivity (0.5-100 uS/cm) and temperature (-40°C to +125°C) with automatic temperature compensation.

Key Features

- Simultaneous measurement of electrical conductivit...
- Ultra-low conductivity range: 0.5-50 uS/cm or 2-10...
- 316L stainless steel coaxial electrode + food-grad...
- Dual analog (0.5-4.5V), LIN, or CAN bus output opt...
- High pressure rating up to 1.0 MPa, IP67 automotiv...

Typical Applications

- Hydrogen Fuel Cell (FCEV) stack thermal management...
- EV high-voltage battery & power electronics liquid...
- Deionized (DI) water & ultra-pure industrial water...

Technical Specifications & Model Selection

Parameter	MI-Cond-02 (P824)	MI-Cond-03 (P838)	FCEV QT Standard
Conductivity Range	0.5 - 50 uS/cm	0.5 - 50 uS/cm	2.0 - 100 uS/cm
Conductivity Accuracy	±1 uS/cm (<10 uS), ±5% (>10 uS)	±1 uS/cm (<10 uS), ±5% (>10 uS)	±2.5 uS/cm
Temperature Range	-40°C to +105°C	-40°C to +105°C	-40°C to +125°C
Supply Voltage	9-16V DC (12V Nom.)	9-16V DC / 18-36V DC	8-16V DC / 16-32V DC
Output Signal	0.5-4.5V / LIN / CAN	0.5-4.5V / LIN / CAN	0.5-4.5V (Cond) + NTC/Voltage (Temp)
Thread Connection	M14x1.5 / M18x1.5	M14x1.5 / Quick Coupling	M18x1.5 / 3/8" NPT
Wetted Materials	SUS316L + PEEK + FKM	SUS316L + PEEK + EPDM	SUS316L + PEEK