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Semiconductor devices - Semiconductor interface for automotive vehicles - Part 4: Evaluation method of data interface for automotive vehicle sensors

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/19

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**Semiconductor devices - Semiconductor interface for automotive vehicles - Part 4: Evaluation method of data interface for automotive vehicle sensors  
(IEC 62969-4:2018)**

Dispositifs à semiconducteurs - Interface à semiconducteurs pour les véhicules automobiles - Partie 4: Méthode d'évaluation de l'interface de données destinée aux capteurs de véhicules automobiles  
(IEC 62969-4:2018)

Halbleiterbauelemente - Halbleiterschnittstelle für Automobile - Teil 4: Bewertungsverfahren für Datenschnittstellen bei Automobil-Sensoren  
(IEC 62969-4:2018)

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**EN IEC 62969-4:2018 (E)****European foreword**

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Edition 1.0 2018-06

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

**Semiconductor devices – Semiconductor interface for automotive vehicles –  
Part 4: Evaluation method of data interface for automotive vehicle sensors**

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de véhicules automobiles**





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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

SEMICONDUCTOR DEVICES –  
SEMICONDUCTOR INTERFACE FOR AUTOMOTIVE VEHICLES –

**Part 4: Evaluation method of data interface  
for automotive vehicle sensors**

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FDIS	Report on voting
47/2470/FDIS	47/2487/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.



A list of all parts in the IEC 62969 series, published under the general title *Semiconductor devices – Semiconductor interface for automotive vehicles*, can be found on the IEC website.

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## INTRODUCTION

The IEC 62969 series is composed of four parts as follow:

- IEC 62969-1 *Semiconductor devices – Semiconductor interface for automotive vehicles – Part 1: General requirements of power interface for automotive vehicle sensors*
- IEC 62969-2 *Semiconductor devices – Semiconductor interface for automotive vehicles – Part 2: Efficiency evaluation methods of wireless power transmission using resonance for automotive vehicle sensors*
- IEC 62969-3 *Semiconductor devices – Semiconductor interface for automotive vehicles – Part 3: Shock driven piezoelectric energy harvesting for automotive vehicle sensors*
- IEC 62969-4 *Semiconductor devices – Semiconductor interface for automotive vehicles – Part 4: Evaluation method of data interface for automotive vehicle sensors*

The IEC 62969 series covers power and data interfaces for sensors in automotive vehicles. The first part covers general requirements of test conditions such as temperature, humidity, vibration, etc., for automotive sensor power interface. It also includes various electrical performances of power interface such as voltage drop from power source to automotive sensors, noises, voltage level, etc. The second part covers “Efficiency evaluation methods of wireless power transmission using resonance for automotive vehicle sensors “. The third part covers “Shock driven piezoelectric energy harvesting for automotive vehicle sensors”. The fourth part covers “Evaluation methods of data interface for automotive vehicle sensors”.

## **SEMICONDUCTOR DEVICES – SEMICONDUCTOR INTERFACE FOR AUTOMOTIVE VEHICLES –**

### **Part 4: Evaluation method of data interface for automotive vehicle sensors**

#### **1 Scope**

This part of IEC 62969 specifies a method of directly fault injection test for automotive semiconductor sensor interface that can be used to support the conformance assurance in the vehicle communications interface.

#### **2 Normative references**

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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