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**Road vehicles — Electrical  
performance of starter motors — Test  
methods and general requirements**

*Véhicules routiers — Caractéristiques électriques des démarreurs —  
Méthodes d'essai et conditions générales*



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## Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 22, *Road vehicles*, Subcommittee SC 3, *Electrical and electronic equipment*.

This third edition cancels and replaces the second edition (ISO 8856:1995), which has been technically revised. It also incorporates the Amendment ISO 8856:1995/Amd1:1997.

# Road vehicles — Electrical performance of starter motors — Test methods and general requirements

## 1 Scope

This International Standard lays down test methods and general requirements for the determination of the electrical characteristics of DC starter motors intended to start internal combustion engines of road vehicles.

## 2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 2.1

#### **lock torque**

torque of starter motor at the pinion with the armature shaft locked (no rotation)

Note 1 to entry: It is expressed in Nm.

### 2.2

#### **nominal power**

$P_{\text{nom}}$

power declared by the starter motor manufacturer corresponding to the maximum power output at the reference temperature when determined in accordance with this International Standard

Note 1 to entry: It is expressed in W.

### 2.3

#### **power output**

$P$

power derived from measurements of torque and rotational frequency of the motor pinion shaft

Note 1 to entry: It is expressed in W.

### 2.4

#### **power supply**

battery or battery simulation device which delivers a voltage/current characteristic as defined in this International Standard

### 2.5

#### **reference temperature**

temperature at which the performance curves and nominal power shall be reported

Note 1 to entry: Reference temperature is expressed in °C.

Note 2 to entry: It is equal to 20 °C.

### 2.6

#### **total resistance of starter motor**

$R_S$

resistance value of the terminal voltage, see [Figure 2](#), divided by the starter motor current (steady state current of solenoid included)

Note 1 to entry: It is expressed in  $\Omega$ .