



BSI Standards Publication

# Electric-electronic interface between chassis-cab and bodywork of refuse collection vehicles (RCVs)

**National foreword**

This Published Document is the UK implementation of CEN/TR 16596:2013.

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A list of organizations represented on this committee can be obtained on request to its secretary.

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TECHNICAL REPORT

**CEN/TR 16596**

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English Version

## Electric-electronic interface between chassis-cab and bodywork of refuse collection vehicles (RCVs)

Interface électrique-électronique entre le châssis-cabine et  
la superstructure des bennes de collecte des déchets

CAN-Schnittstelle zwischen Fahrgestellen und Aufbau von  
Abfallsammelfahrzeugen

This Technical Report was approved by CEN on 24 September 2013. It has been drawn up by the Technical Committee CEN/TC 183.

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## **Foreword**

This document (CEN/TR 16596:2013) has been prepared by Technical Committee CEN/TC 183 “Waste management”, the secretariat of which is held by DIN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

## **Introduction**

On September 29, 2009, CEN/TC 183/WG 2 mandated its PWG 5 to work on a proposal for the CAN communication between the chassis-cab and the bodywork of RCVs. Based on an earlier proposal (PWG 5 from 2002 to 2005), the experts of PWG 5 discussed the possibilities and concluded in the results shown in this document.

To comply with the requirements of the relevant safety Directives and Standards, it is unavoidable to use electronic controls on the RCV chassis-cab and on the bodywork of RCVs because the control devices have to communicate to get the RCV working in proper and safe conditions.

This document contains a proposal for an interface between the chassis-cab and the bodywork in terms of electrical wiring including plugs and positions for the plugs as well as an adequate CAN protocol.

## 1 Scope

This Technical Report proposes a standardized interface between the chassis-cab and the bodywork of refuse collection vehicles. The solution, initially for vehicles with hard wired interface and CAN interface, is developed into full CAN communication between the bodywork and the chassis-cab.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1501-1:2011, *Refuse collection vehicles — General requirements and safety requirements — Part 1: Rear loaded refuse collection vehicles*

EN 1501-5:2011, *Refuse collection vehicles — General requirements and safety requirements — Part 5: Lifting devices for refuse collection vehicles*

SAE J1939/71:2010-02, *Vehicle application layer*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1501-1:2011 and the following apply.

### 3.1

#### **electric interface**

provisions for power supply and control signals to ensure safe connections between the chassis-cab and the bodywork

### 3.2

#### **electronic interface**

provisions for communication between the chassis-cab and the bodywork by means of CanBus

### 3.3

#### **Electronic Control Unit**

ECU

embedded system that controls one or more electrical systems or subsystems in a RCV

## 4 Electric interface

### 4.1 Objective

This clause describes the electric interface between all chassis and the bodywork of refuse collection vehicles. Plugs, pin-outs and signals are defined.

The chassis-cab shall be provided with an electric-electronic interface ready to be connected inside the cab and outside the cab. From inside to outside of the cab, there is a defined wiring loom to connect the chassis information and which is also used for information reserved for the bodywork. By this means, the bodywork manufacturer does not need to rework the wiring and can therefore avoid wrong handling and damages on the chassis-cab side.

Annex A shows the architecture of the electric-electronic interface and examples of possible ways the bodybuilder can use it.