



**SLOVENSKI STANDARD**  
**SIST EN 14116:2007+A1:2009/kFprA2:2010**  
**01-julij-2010**

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**Posode za prevoz nevarnih snovi - Digitalni vmesnik za prepoznavno napravo polnjenja - Dopnilo A2**

Tanks for transport of dangerous goods - Digital interface for the product recognition device

Tanks für die Beförderung gefährlicher Güter - Digitale Schnittstelle für das Produkterkennungssystem

Citernes destinées au transport de matières dangereuses - Interface numérique du dispositif de reconnaissance de produits

**Ta slovenski standard je istoveten z: EN 14116:2007+A1:2008/FprA2**

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**ICS:**

13.300	Varstvo pred nevarnimi izdelki	Protection against dangerous goods
23.020.20	Posode in vsebniki, montirani na vozila	Vessels and containers mounted on vehicles
35.240.60	Uporabniške rešitve IT v transportu in trgovini	IT applications in transport and trade

**SIST EN**  
**14116:2007+A1:2009/kFprA2:2010**

**en,fr,de**



EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**FINAL DRAFT**  
**EN 14116:2007+A1:2008**  
**FprA2**

March 2010

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ICS 13.300; 23.020.20; 35.240.60

English Version

## Tanks for transport of dangerous goods - Digital interface for the product recognition device

Citernes destinées au transport de matières dangereuses -  
Interface numérique du dispositif de reconnaissance de  
produits

Tanks für die Beförderung gefährlicher Güter - Digitale  
Schnittstelle für das Produkterkennungssystem

This draft amendment is submitted to CEN members for unique acceptance procedure. It has been drawn up by the Technical Committee CEN/TC 296.

This draft amendment A2, if approved, will modify the European Standard EN 14116:2007+A1:2008. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

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## Foreword

This document (EN 14116:2007+A1:2008/FprA2:2010) has been prepared by Technical Committee CEN/TC 296 "Tanks for transport of dangerous goods", the secretariat of which is held by AFNOR.

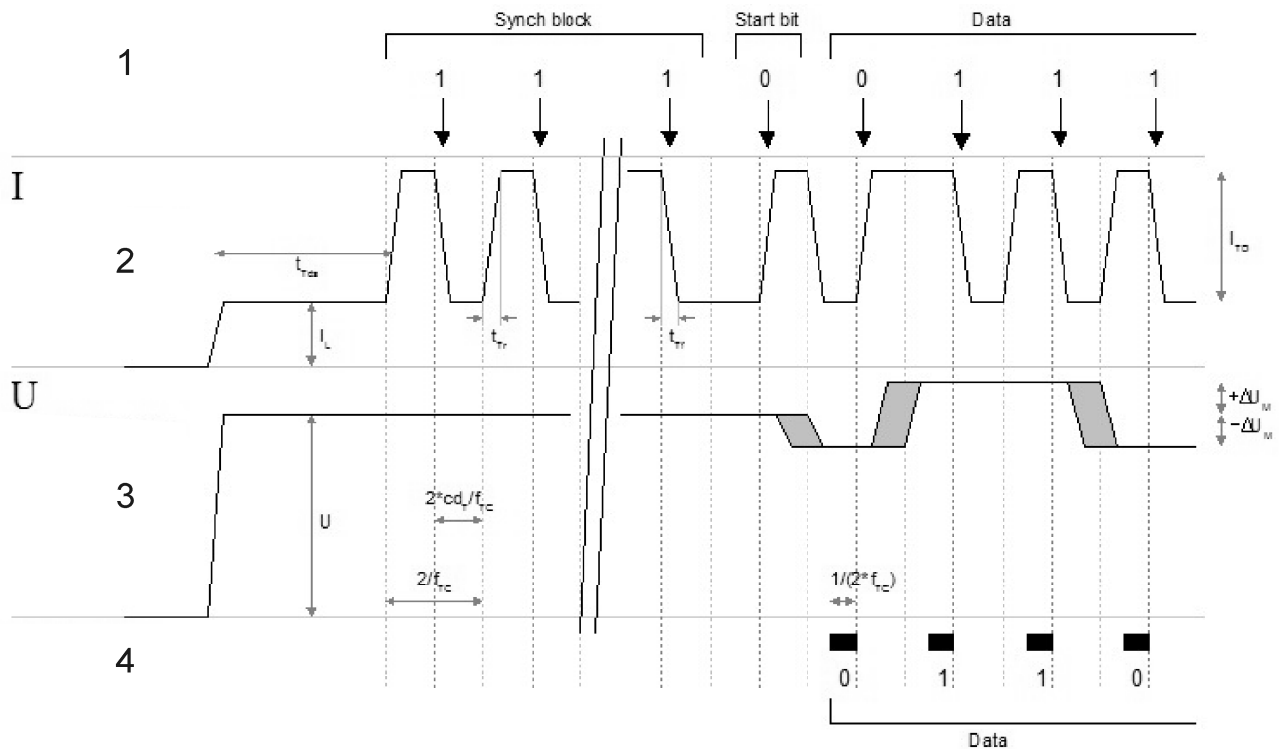
This document is currently submitted to the Unique Acceptance Procedure.

## EN 14116:2007+A1:2008/FprA2:2010 (E)

**1 Modification to Figure 8, Operational data of Multi-PID**

Replace Figure 8 with the following:

"

**Key**

- 1 Bit stream sent by Multi-PID
- 2 Current modulated by Multi-PID (Manchester code)
- 3 Voltage modulated by PRD (level code)
- 4 Sampling interval of Multi-PID retrieving bit stream from PRD".

**2 Modification to Annex C**

Replace the whole text of Annex C with the following:

"The step by step procedure to form the CRC16 check bytes is as follows:

- 1 load a 16-bit variable with 0xFFFF;
- 2 exclusive OR the first 8-bit byte with the low order byte of the 16-bit variable, putting the result into the 16-bit variable;
- 3 shift the 16-bit variable one bit to the right;
- 4 a) if the bit shifted out to the right (flag) is one, exclusive OR the 16-bit variable with 0xA001;

- b) if the bit shifted out to the right is a zero; return to step 3;
- 5 repeat step 3 and step 4 until 8 shifts have been performed;
- 6 exclusive OR the next 8-bit byte with the low byte of the 16-bit variable;
- 7 repeat step 3 through step 6 until all bytes of the message have been exclusive OR with the 16-bit variable and shifted 8 times;
- 8 the contents of the 16-bit variable are the 2 byte CRC checksum and is added to the message most significant byte first.

In order to check this calculation algorithm on a numerical value, the following example can be used:

Original message 02 07 (hexadecimal value: first byte 02h, second byte 07h)

CRC16 = 0x1241 (hexadecimal value: most significant byte = 12, least significant byte = 41).

The complete message is: 02 07 12 41 (hexadecimal value, most significant byte transmitted first, least significant byte transmitted last).".