



TECHNICAL SPECIFICATION

**PowerLine Telecommunications (PLT);  
Coexistence of Narrow Band PLT technologies operating  
in the frequency bands 3kHz to 95 kHz, 95 kHz  
to 125 kHz and 125 kHz to 140 kHz;  
[IEEE Std 1901.2TM - 2013, IEEE Standard for Low-Frequency  
(less than 500 kHz) Narrowband Power Line Communications  
for Smart grid Applications, Section 10 Coexistence]**

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Reference

DTS/PLT-00038

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Keywords

endorsement, modem, powerline, smart grid

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## Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Powerline Telecommunications (PLT).

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## Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

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# 1 Scope

The present document provides the requirements to support coexistence within the frequency band 3kHz up to 95 kHz, sub-band above 95 kHz up to 125 kHz and sub-band above 125 kHz up to 140 kHz as given in CENELEC EN 50065-1 [i.7] (also referred to as the CENELEC A band, B and C bands), for the following standards:

- IEEE Std 1901.2™ [1].
- IEC 61334-3-1 [i.1].
- IEC 61334-4-32 [i.2].
- IEC 61334-5-1 [i.3].
- IEC 61334-5-2 [i.4].
- ISO/IEC 14543-3-5 [i.5].
- ISO/IEC 14908-3 [i.6].

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## 2 References

### 2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

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The following referenced documents are necessary for the application of the present document.

- [1] IEEE Std 1901.2™ - 2013: "IEEE Standard for Low-Frequency (less than 500 kHz) Narrowband Power Line Communications for Smart grid Applications", section 10 Coexistence.

### 2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

- [i.1] IEC 61334-3-1: "Distribution automation using distribution line carrier systems - Part 3-1: Mains signalling requirements - Frequency bands and output levels".
- [i.2] IEC 61334-4-32: "Distribution automation using distribution line carrier systems - Part 4: Data communication protocols - Section 32: Data link layer - Logical link control (LLC)".
- [i.3] IEC 61334-5-1: "Distribution automation using distribution line carrier systems - Part 5-1: Lower layer profiles - The spread frequency shift keying (S-FSK) profile".
- [i.4] IEC 61334-5-2: "Distribution automation using distribution line carrier systems - Part 5-2: Lower layer profiles - Frequency shift keying (FSK) profile".

- [i.5] ISO/IEC 14543-3-5: "Information technology -- Home electronic system (HES) architecture -- Part 3-5: Media and media dependent layers -- Power line for network based control of HES Class 1".
- [i.6] ISO/IEC 14908-3:" Information technology -- Control network protocol -- Part 3: Power line channel specification".
- [i.7] CENELEC EN 50065-1: "Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz - Part 1: General requirements, frequency bands and electromagnetic disturbances".

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## Endorsement notice

All elements of Section 10, IEEE Std 1901.2TM [1] - 2013: "IEEE Standard for Low-Frequency (less than 500 kHz) Narrowband Power Line Communications for Smart grid Applications" coexistence apply.

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## History

<b>Document history</b>		
V1.1.1	June 2015	Publication