

# Common charger agreement – Challenges and perspectives for European Standardization

Amending the 2014 Radio Equipment Directive (RED), first  
step towards mandating a common charger  
October 2022

## Introduction

On 4 October 2022, the EU Parliament voted in favour of adopting a common charger for the EU single market, through an amendment to the Radio Equipment Directive (RED)<sup>1</sup>, which establishes a single charging solution for small and medium size electronic devices regardless of their manufacturer<sup>2</sup>. Those devices shall be equipped with USB-C receptable at the device side by 2024 to access the EU market. The same requirements will also become applicable to laptops in 2026.

CEN and CENELEC support the interoperability and safety of mobile phones and other devices, as well as EU's initiatives to reduce the e-waste and to improve the consumer's convenience. CEN and CENELEC appreciate that the new law recognises the value of European Standards, in particular EN IEC 62680-1-2 and EN IEC 62680-1-3. CEN and CENELEC also welcome the possibility to develop harmonized standards for wireless charging.

It demonstrates the crucial role standards play in supporting sustainable charging solutions in Europe, now and in the future, in particular for interoperability, innovation and conformity assessment purposes. **CEN and CENELEC are committed to continue working with the European Commission to help the EU fully achieve its policy**

<sup>1</sup> [https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2021/0291\(COD\)&l=en](https://oeil.secure.europarl.europa.eu/oeil/popups/ficheprocedure.do?reference=2021/0291(COD)&l=en)

<sup>2</sup> mobile phones, tablets, e-readers, earbuds, digital cameras, headphones and headsets, handheld videogame consoles and portable speakers e-readers, earbuds, keyboards, computer mice, portable navigation devices, and laptops

**objectives, to the benefit of all consumers and for the protection of the environment.**

European Standardization has played a leading role in creating the EU Single Market. Standards support market-based competition and help ensure the interoperability of complementary products and services. They reduce costs, improve safety, and enhance competition. With this paper, CEN and CENELEC would like to shed light on some aspects of the legislative proposal, its potential implication in the European market, as well as the impact on European and international standardization.

## 1. Provisions - what is new?

The provisional agreement on the common chargers puts forward:

- **USB-C as the chosen receptacle on the device end** for frequently used **small and medium-sized portable electronic devices** allowing the consumers to charge their devices with the same charger
- **Harmonized charging communication protocols** for devices that support fast charging to ensure an optimised performance
- **Unbundling the sale of the chargers**, allowing consumers to decide whether to buy a device with or without a charger
- Providing clear information about the **charging performance** to help consumers to select a compatible charger

### 1.1 Interoperable charging solution

A charger is a device used for charging or recharging batteries: it is plugged into a power outlet (or may be part of it) to charge a battery. A cable terminated in standardized connectors is used for connecting the charger and the device together.

The amendment to the Radio Equipment Directive addresses the interoperability on the device end, while the interoperability of the actual charger, also referred to as external power supply (EPS), will be addressed by the review of the Eco-design Regulation. At this stage, the notion of 'common charger' does not imply the introduction in the European market of a same, uniform charger for all devices: the amendment relates to the harmonization of the connectors at the device end only, for which USB-C will be the common port. It should allow consumers to charge their devices with any USB-C charger, regardless of the device brand.

This is why the amendment requires that devices, as far as they are capable of being recharged via wired charging **shall be equipped with the USB Type-C receptacle**, as described in **the standard EN IEC 62680-1-3:2021** and **shall be capable**, in case of charging power lower than 60 watts, of being charged with cables which comply with **the standard EN IEC 62680-1-3:2021**.

## 1.2 Harmonized charging communication protocols

There are currently several types of charging communication protocols for which a minimum level of performance is not always guaranteed. The harmonization of communication protocols should ensure an adequate level of performance for the targeted devices, while reducing environmental waste and avoiding fragmentation of the European market.

This is why the amendment requires that devices, as far as they are capable of being recharged via wired charging at voltages higher than 5 volts or currents higher than 3 amperes or powers higher than 15 watts, **shall incorporate the USB Power Delivery, as described in the standard EN IEC 62680-1-2:2021.**

## 1.3 Unbundled chargers

Unbundling the charger from the device could in principle benefit the consumers: one charger could possibly charge all consumers' devices. However, the sale of a device with its respective charger ensures that consumers will use the appropriate charger to properly charge their devices. Unbundling the chargers could accelerate the increase in market share of low-cost and low-quality chargers, as some consumers may prefer to select the cheapest charger available in the market to charge all their devices. This can effectively introduce some new risks, hence, an additional effort from the competent market surveillance authorities shall be considered to ensure that the consumers will access the right, optimised and safe chargers for their devices.

## 1.4 Coherence in the information and labelling for consumers

To balance the possible risks related to the unbundling of charger, the amendment introduces requirements so that consumers receive the necessary information on the charging performance characteristics and the charging device that can be used with it. The information on the device and chargers should be clear and consistent in a way that the consumers will be able to select the suitable charger for their devices without any confusion.

## 2. Standards' application, conformity assessment and market access

The amendment, through its new Article 3 ('essential requirements') and its Annex Ia, makes compliance with two European Standards (ENs) mandatory<sup>3</sup>, for common USB-C charging port and the harmonised fast charging technology, which have been developed under the lead of the International Electrotechnical Commission (IEC) - and

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<sup>3</sup> New paragraph introduced under Article 3, which reads: "Radio equipment falling within the categories or classes specified in Annex Ia, Part I shall be so constructed that it complies with the specifications on charging capabilities set out in that Annex for the relevant category or class of radio equipment."

adopted by CENELEC as ENs<sup>4</sup>, thanks to the Frankfurt Agreement, which allows the alignment between European and International standardization.

**CENELEC appreciates the recognition of these ENs and the acknowledgment of their technical value. Nevertheless, this configuration does not come without challenges.** The reference to two specific editions (from 2021) of standards - making their application mandatory - puts forward the risk that users may not benefit from products that would apply, in the future, the latest editions of the standards; hence the latest technological state of the art<sup>5</sup>. Therefore, there is a need to establish a mechanism between CEN, CENELEC and the European Commission to monitor and bridge the gap between the evolution of the ENs and the legislation - since the European Commission is empowered to adopt delegated act to modify the Annex IA (and the references to the standards' editions<sup>6</sup>). It has to be noted that the New Legislative Framework (NLF), which allows the citation of harmonized standards in the EU Official Journal for presumption of conformity purposes, provides streamlined mechanisms for the referencing of updated versions of standards<sup>7</sup>.

## 2.1 Conformity assessment

The manufacturer shall perform a conformity assessment of the radio equipment with a view to meeting the essential requirements set out in Article 3. According to Article 17, which now addresses the common chargers, manufacturers shall demonstrate compliance of radio equipment with the essential requirements set out in Article 3(1) using any of the following conformity assessment procedures:

- internal production control (conformity assessment Module A)
- EU-type examination that is followed by the conformity to type based on internal production control (conformity assessment Module B and C)
- conformity based on full quality assurance (conformity assessment Module H)

However, since EN IEC 62680-1-2:2021 and EN IEC 62680-1-3:2021 are not harmonized standards cited in the EU Official Journal, it can be unclear for economic operators how the internal production control (Module A), as set out in the Annex II of the RED, can be used in the absence of harmonized standards.

This is why the perspective to develop harmonized standards should be pursued in the future. In particular, the "transformation" of these standards into harmonized standards would provide clarity to economic operators as to which exact parts of the standards are necessary to comply with the essential requirements introduced by the amendment

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<sup>4</sup> EN IEC 62680-1-2:2021 'Universal serial bus interfaces for data and power - Part 1-2: Common components - USB Power Delivery specification' and EN IEC 62680-1-3:2021 'Universal serial bus interfaces for data and power - Part 1-3: Common components - USB Type-C Cable and Connector Specification'

<sup>5</sup> Both standards are currently being revised by IEC TC 100, with a publication date expected early 2023.

<sup>6</sup> "in the light of scientific and technological progress or market developments"

<sup>7</sup> <https://www.cencenelec.eu/news-and-events/news/2022/brief-news/2022-03-09-new-legislative-framework/>

to the RED. Harmonized standard would ensure the correct application of the appropriate clauses of EN IEC 62680-1-2 and EN IEC 62680-1-3.

## 2.2 Technological development and innovation

USB, as defined in EN IEC 62680 series, constitutes an evolving system for data communication and power delivery, which presents the advantage of ensuring, by design, interoperability. Such a system enables multi types and generations of USB implemented products to interoperate and co-exist in the market – with consequences on consumer convenience and extended product lifetime.

**The different USB standards will continue to evolve to meet global market and consumer's needs in order to remain broadly adopted. The technology is evolving very rapidly seeking for faster, more efficient technological (wired and wireless) solutions. In this regard, the mandatory application of specifications (USB Type-C receptable, USB Power Delivery - described in the ENs) should not limit manufacturers and consumers to only one technology, or one specific version of an evolving technology like USB.**

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## ABOUT CEN AND CENELEC

CEN (European Committee for Standardization) and CENELEC (European Committee for Electrotechnical Standardization) are recognised by the European Union (EU) and the European Free Trade Association (EFTA) as European Standardization Organizations responsible for developing standards at European level, as per European Regulation 1025/2012. The members are the National Standards Bodies (CEN) and National Electrotechnical Committees (CENELEC) from 34 European countries. European Standards (ENs) and other standardization deliverables are adopted by CEN and CENELEC, are accepted and recognized in all of these countries. These standards contribute to enhancing safety, improving quality, facilitating cross-border trade and strengthening of the European Single Market. They are developed through a process of collaboration among experts nominated by business and industry, research institutions, consumer and environmental organizations, trade unions and other societal stakeholders. CEN and CENELEC work to promote the international alignment of standards in the framework of technical cooperation agreements with ISO (International Organization for Standardization) and the IEC (International Electrotechnical Commission).