



**Access, Terminals, Transmission and Multiplexing (ATTM);
External Common Power Supply for Customer Premises
Network and Access Equipment;
Part 7: Adaptive and multiple output power supplies based on
USB Type C connector and USB PD support**

[ETSI TR 102 874-7 V1.1.1 \(2025-06\)](https://standards.iteh.ai/catalog/standards/etsi/f938f4a1-daf6-4e2f-88a7-0428702fdada/etsi-tr-102-874-7-v1-1-1-2025-06)

<https://standards.iteh.ai/catalog/standards/etsi/f938f4a1-daf6-4e2f-88a7-0428702fdada/etsi-tr-102-874-7-v1-1-1-2025-06>

Reference

DTR/ATTMSDMC-105181

Keywords

customer premises networks, power supply

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - APE 7112B
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° w061004871

Important notice

The present document can be downloaded from the
[ETSI Search & Browse Standards](#) application.

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format on [ETSI deliver](#) repository.

Users should be aware that the present document may be revised or have its status changed,
this information is available in the [Milestones listing](#).

If you find errors in the present document, please send your comments to
the relevant service listed under [Committee Support Staff](#).

If you find a security vulnerability in the present document, please report it through our
[Coordinated Vulnerability Disclosure \(CVD\)](#) program.

Notice of disclaimer & limitation of liability

The information provided in the present deliverable is directed solely to professionals who have the appropriate degree of experience to understand and interpret its content in accordance with generally accepted engineering or other professional standard and applicable regulations.

No recommendation as to products and services or vendors is made or should be implied.

No representation or warranty is made that this deliverable is technically accurate or sufficient or conforms to any law and/or governmental rule and/or regulation and further, no representation or warranty is made of merchantability or fitness for any particular purpose or against infringement of intellectual property rights.

In no event shall ETSI be held liable for loss of profits or any other incidental or consequential damages.

Any software contained in this deliverable is provided "AS IS" with no warranties, express or implied, including but not limited to, the warranties of merchantability, fitness for a particular purpose and non-infringement of intellectual property rights and ETSI shall not be held liable in any event for any damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of information, or any other pecuniary loss) arising out of or related to the use of or inability to use the software.

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2025.
All rights reserved.

Contents

Intellectual Property Rights	4
Foreword.....	4
Modal verbs terminology.....	4
Executive summary	4
Introduction	4
1 Scope	6
2 References	6
2.1 Normative references	6
2.2 Informative references.....	6
3 Definition of terms, symbols and abbreviations.....	6
3.1 Terms.....	6
3.2 Symbols.....	7
3.3 Abbreviations	7
4 EU Regulation, and defining standards and specifications	7
4.1 European Directive 2022/2380.....	7
4.2 Type-C characterisation	7
5 Challenges and precautions.....	8
5.1 Challenges and precautions when using Type-C sources and sinks	8
5.2 Precautions when using the Type-C specifications:	8
5.3 The behaviour of multisource.....	8
Annex A: How to select a Type-C source (charger)	9
Annex B: Usage of USB-C and USB-A.....	10
Annex C: USB-C with USB PD (re-)negotiation mechanism issues	11
Annex D: USB-C with USB PD power technical requirements	13
Annex E: Current and power management	14
Annex F: Bibliography	15
Annex G: Change history	16
History	17