



Institut luxembourgeois de la normalisation
de l'accréditation, de la sécurité et qualité
des produits et services

ILNAS-EN 50397-2:2022

Covered conductors for overhead lines and the related accessories for rated voltages above 1 kV a.c. and not exceeding 36 kV a.c. - Part 2:

Conducteurs gainés pour lignes
aériennes et accessoires associés pour
des tensions assignées supérieures à 1 kV
en courant alternatif et ne dépassant pas

Kunststoffumhüllte Leiter und
zugehörige Armaturen für Freileitungen
mit Nennspannungen über 1 kV und nicht
mehr als 36 kV Wechselspannung - Teil 2:

07/2022



National Foreword

This European Standard EN 50397-2:2022 was adopted as Luxembourgish Standard ILNAS-EN 50397-2:2022.

Every interested party, which is member of an organization based in Luxembourg, can participate for FREE in the development of Luxembourgish (ILNAS), European (CEN, CENELEC) and International (ISO, IEC) standards:

- Participate in the design of standards
- Foresee future developments
- Participate in technical committee meetings

<https://portail-qualite.public.lu/fr/normes-normalisation/participer-normalisation.html>

THIS PUBLICATION IS COPYRIGHT PROTECTED

Nothing from this publication may be reproduced or utilized in any form or by any mean - electronic, mechanical, photocopying or any other data carries without prior permission!

EUROPEAN STANDARD ^{ILNAS-EN 50397-2:2022} **EN 50397-2**
NORME EUROPÉENNE
EUROPÄISCHE NORM

July 2022

ICS 29.240.20

Supersedes EN 50397-2:2009

English Version

**Covered conductors for overhead lines and the related
accessories for rated voltages above 1 kV a.c. and not
exceeding 36 kV a.c. - Part 2: Accessories for covered
conductors - Tests and acceptance criteria**

Conducteurs gainés pour lignes aériennes et accessoires
associés pour des tensions assignées supérieures à 1 kV
en courant alternatif et ne dépassant pas 36 kV en courant
alternatif - Partie 2: Accessoires pour conducteurs gainés -
Essais et critères d'acceptation

Kunststoffumhüllte Leiter und zugehörige Armaturen für
Freileitungen mit Nennspannungen über 1 kV und nicht
mehr als 36 kV Wechselspannung - Teil 2: Armaturen für
kunststoffumhüllte Freileitungsseile - Prüfungen und
Anforderungen

This European Standard was approved by CENELEC on 2022-06-27. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

Page

European foreword	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Requirements	8
4.1 General requirements	8
4.2 Specific requirements for fittings used on covered conductor	9
4.3 Marking	10
5 Quality assurance	10
6 Classification of tests – Type tests, sample tests, routine tests	10
6.1 Type tests	10
6.2 Sample tests	11
6.3 Routine tests	11
7 Tests	11
7.1 General	11
7.2 Visual examination	12
7.3 Dimensional and material verification	12
7.4 Test for permanent marking	12
7.5 Mechanical tests	12
7.6 Hot dip galvanizing test	29
7.7 Water tightness test	29
7.8 Electrical ageing test for connectors and Joints	30
7.9 Short-circuit test on APD or EPD	30
7.10 Power arc test	31
7.11 Environmental test for suspension and tension clamps	32
7.12 Environmental tests for connectors and joints	35
7.13 Endurance test for joints (optional)	36
Annex A (normative) Type tests, sample tests and routine tests	37
Annex B (informative) Example of sampling with inspection by attributes	39
Annex C (informative) Example of sampling with inspection by variable	40
Annex D (normative) Special national conditions	41
Bibliography	42

Figures

Figure 1 — Test arrangement for damage and failure load test	13
Figure 2 — Test arrangement of slip test at ambient temperature	14
Figure 3 — Slip test arrangement at low temperature.....	16
Figure 4 — Lift and side load test	18
Figure 5 — Tensile test arrangement	20
Figure 6 — Arrangement for the low temperature zone	21
Figure 7 — Test arrangement	26
Figure 8 — Mechanical stresses on earth parking device	28
Figure 9 — Test arrangement for water tightness test	30
Figure 10 — Resistance measurement.....	31
Figure 11 — Example of power arc test arrangement for arc protection system.....	32

Tables

Table 1 — Specified minimum loads	18
Table A.1	37