

Distribution automation using distribution line carrier systems —

**Part 3-22: Mains signalling
requirements — MV phase-to-earth and
screen-to-earth intrusive coupling
devices**

The European Standard EN 61334-3-22:2001 has the status of a
British Standard

ICS 29.240.20; 33.200

National foreword

This British Standard is the official English language version of EN 61334-3-22:2001. It is identical with IEC 61334-3-22:2001.

The UK participation in its preparation was entrusted to Technical Committee PEL/57, Power system control and associated communications, which has the responsibility to:

- aid enquirers to understand the text;
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Distribution automation using distribution line carrier systems
Part 3-22: Mains signaling requirements -
MV phase-to-earth and screen-to-earth intrusive coupling devices
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Automatisation de la distribution à l'aide
de systèmes de communication à
courants porteurs
Partie 3-22: Exigences concernant la
transmission des signaux sur le secteur -
Dispositifs de couplage intrusif phase-
terre et blindage-terre MT
(CEI 61334-3-22:2001)

Verteilungsautomatisierung mit Hilfe von
Trägersystemen auf Verteilungsleitungen
Teil 3-22: Netzbedingte Anforderungen
an die Signalübertragung -
Außenleiter - Erdleiter und eingefügte
Schirm - Erdleiter Ankopplungs-
einrichtungen für Mittelspannung
(IEC 61334-3-22:2001)

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CENELEC

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

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Foreword

The text of document 57/477/FDIS, future edition 1 of IEC 61334-3-22, prepared by IEC TC 57, Power system control and associated communications, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61334-3-22 on 2000-11-01.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2001-10-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2003-11-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

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INTRODUCTION

Requirements of IEC 61334-3-21 are applicable for phase-to-phase isolated capacitive coupling devices for power-line carrier systems on distribution line carriers (DLC).

However, no international standard is available for the application of screen-to-earth intrusive inductive coupling devices.

Furthermore the already standardised earthed capacitive coupling device for high voltage power-line carrier systems as described by IEC 60481 is not suitable for the application of DLC on medium voltage (MV) networks for the following reasons:

- from a technical point of view, network characteristics differ considerably from HV to MV networks;
- handling of HV and MV equipment requires different operational means;
- from an economical point of view, the coupling device should have a price as low as possible.

These considerations have led to the present standardisation of other coupling devices such as the MV phase-to-earth capacitive coupling device and the screen-to-earth intrusive inductive coupling device. Figures 1 and 2 show solutions for these devices. Additional solutions may become available later.

As other coupling devices are standardised, new parts to IEC 61334 will be added.

DISTRIBUTION AUTOMATION USING DISTRIBUTION LINE CARRIER SYSTEMS –

Part 3-22: Mains signalling requirements – MV phase-to-earth and screen-to-earth intrusive coupling devices

1 Scope and object

This part of IEC 61334 is applicable to MV phase-to-earth capacitive and screen-to-earth intrusive inductive coupling devices for medium voltage (MV) distribution line carrier (DLC) systems. Non-intrusive inductive coupling devices are not within the scope of this standard.

The coupling device ensures

- a) the efficient transmission/reception of carrier-frequency signals between the DLC transceiver and the power line;
- b) the safety of personnel and the protection of the low-voltage parts of the installation against the effects of the power-frequency voltage and transient overvoltages.

The object of this part of IEC 61334 is to establish definitions, requirements, methods of testing and rated values for phase-to-earth capacitive and screen-to-earth intrusive inductive coupling devices to be used in MV-DLC systems.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of part of IEC 61334. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 61334 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60060-1: *High voltage test techniques – Part 1: General definitions and test requirements*

IEC 60358: *Coupling capacitors and capacitor dividers*

IEC 60870-2-2: *Telecontrol equipment and systems – Part 2: Operating conditions – Section 2: Environmental conditions (climatic, mechanical and other non-electrical influences)*