

TECHNICAL SPECIFICATION **IEC TS 61334-5-4**

First edition
2001-06

**Distribution automation using
distribution line carrier systems –**

**Part 5-4:
Lower layer profiles –
Multi-carrier modulation (MCM) profile**



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CONTENTS

FOREWORD	4
1 Scope and object	6
2 Normative references	6
3 Definitions and abbreviations	6
3.1 Definitions	6
3.2 Abbreviations	7
4 Lower layer profile structure	8
4.1 Physical layer	8
4.2 MAC sublayer	9
5 Physical layer specification	9
5.1 Modulation	9
5.1.1 Purpose	9
5.1.2 The multicarrier modulation (MCM) principle	9
5.2 Physical layer data format	10
5.2.1 Purpose	10
5.2.2 Transmission method, overview	10
5.2.3 Configuration parameters	11
5.2.4 PHY PDU format, CRC encoding and padding	12
5.2.5 Convolutional encoding	13
5.2.6 Segmentation and interleaving	14
5.2.7 Preamble	14
5.2.8 Modulation	14
5.3 PHY services	15
5.3.1 PHY to MAC interface	15
6 MAC sublayer protocol specification	17
6.1 Overview	17
6.1.1 MAC communication network architecture	17
6.1.2 Features of the MAC sublayer	17
6.2 Transmission procedures	17
6.3 MAC services	18
6.3.1 MAC to LLC interface	18
6.3.2 MAC layer management interface	20
6.4 MAC PDU format	22
6.4.1 MAC control field	22
6.4.2 Address field	23
6.4.3 LLC PDU	23
6.5 MAC addresses	24
6.6 Used MAC PDUs	25
6.6.1 Information PDU	25
6.6.2 Repetition control PDU	25
6.7 MAC invalid PDU	25
6.8 MAC procedures	25
6.8.1 MACphy procedures	26
6.8.2 MACrore procedures	26

6.9 MAC timer values	30
6.10 MAC state transition diagrams/tables.....	30
6.10.1 Startup.....	30
6.10.2 MAC sublayer	31
6.10.3 Non-initiator MAC sublayer	34
Figure 1 – Layered architecture of the DLC-M protocol stack.....	8
Figure 2 – Sample frequency representation of multicarrier modulation	9
Figure 3 – Transmitter data flow diagram (one telegram).....	11
Figure 4 – Block diagram of encoder	13
Figure 5 – MAC transmission using MAC service class 0 (postponed confirmation)	18
Figure 6 – MAC transmission using MAC service class 1 or 2 (round-trip delayed confirmation)	18
Figure 7 – Example for transmission of a MAC PDU with 1 repetition using MAC service class 1 or 2	27
Figure 8 – Time-sequence chart for (error-free) routing repeater procedure.....	28
Figure 9 – MAC startup state diagram	30
Figure 10 – Initiator MAC state diagram	31
Figure 11 – Non-initiator MAC state diagram	34
Table 1 – MAC domain IDs.....	24
Table 2 – MAC node IDs	24
Table 3 – MAC predefined addresses.....	24
Table 4 – Mapping to IEC 61334-4-1 predefined MAC addresses	25
Table 5 – MAC startup state table	31
Table 6 – MAC startup state description	31
Table 7 – Initiator MAC state table	32
Table 8 – Initiator MAC state description	32
Table 9 – Initiator MAC procedures	33
Table 10 – Initiator MAC variables.....	33
Table 11 – Initiator MAC conditions.....	33
Table 12 – Non-initiator MAC state table	34
Table 13 – Non-initiator MAC state description.....	36
Table 14 – Non-initiator MAC procedures	36
Table 15 – Non-initiator MAC variables	37
Table 16 – Non-initiator MAC conditions.....	37

INTERNATIONAL ELECTROTECHNICAL COMMISSION

DISTRIBUTION AUTOMATION USING DISTRIBUTION LINE CARRIER SYSTEMS –

Part 5-4: Lower layer profiles – Multi-carrier modulation (MCM) profile

FOREWORD

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- the required support cannot be obtained for the publication of an International Standard, despite repeated efforts, or
- The subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

IEC 61334-5-4, which is a technical specification, has been prepared by IEC technical committee 57: Power system control and associated communications.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
57/479/CDV	57/517/RVC

Full information on the voting for the approval of this technical specification can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

A bilingual version of this publication may be issued at a later date.

The committee has decided that the contents of this publication will remain unchanged until 2004. At this date, the publication will be

- transformed into an International Standard;
- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

DISTRIBUTION AUTOMATION USING DISTRIBUTION LINE CARRIER SYSTEMS –

Part 5-4: Lower layer profiles – Multi-carrier modulation (MCM) profile

1 Scope and object

This technical specification describes the requirements of the multicarrier modulation (MCM) approach which incorporates the services provided by the physical layer entity and the MAC sublayer with the purpose of building up a set of standards for effective communication on MV and LV network for distribution line carrier (DLC) systems, in the context of IEC 61334-1-1.

Different technical approaches in developing communication systems for DLC communication are in progress. As a consequence, at present, different lower layer profiles are feasible with acceptable results in terms of performance and cost-effectiveness. In many cases, the differences amongst solutions are minor and it is possible to find a common root.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this 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 61334-1-1, *Distribution automation using distribution line carrier systems – Part 1: General considerations – Section 1: Distribution automation system architecture*

IEC 61334-3-1, *Distribution automation using distribution line carrier systems – Part 3-1: Mains signalling requirements – Frequency bands and output levels*

IEC 61334-4-1, *Distribution automation using distribution line carrier systems – Part 4: Data communication protocols – Section 1: Reference model of the communication system*

3 Definitions and abbreviations

3.1 Definitions

For the purpose of this part of IEC 61334, the following definitions apply.

3.1.1

control direction

communication direction from the central system to a field device

3.1.2

domain

logical section of a DLC communication network