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INTERNATIONAL STANDARD

AMENDMENT 1

Information technology – Generic cabling for homes

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FOREWORD

Amendment 1 to International Standard ISO/IEC 15018 was prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

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2 Normative references

Add the following new reference:

IEC 60728-1:2007, *Cable networks for television signals, sound signals and interactive services – Part 1: System performance for forward paths*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

Add, after 3.1.39, the following new terms and definitions:

3.1.40
balun
device to provide impedance transformation between balanced and unbalanced components

3.1.41
external network interface
ENI
connexion device between external network and network access cabling.

NOTE For example, equipment comprising HNI, and baluns where applicable, complies with this definition.

3.1.42
home network interface
HNI
interface for access to the network for distribution of television signal, sound signals and interactive services inside a home (single dwelling)

3.1.43
system outlet
SO
device for interconnecting a subscriber feeder and a receiver lead

[IEC 60728-1, 3.1.90]

3.2 Abbreviations

Add the following abbreviations in alphabetical order:

HF	High frequency
UHF	Ultra-high frequency
VHF	Very high frequency

Add, after Annex D, the following new Annex E:

Annex E
(informative)

Reference implementation of TV and radio applications – Usage of baluns

E.1 Types and locations of baluns

E.1.1 General

The connection of a BCT-B channel to equipment that has a 75 Ω coaxial connection requires the use of a balun.

Also the connection of a balanced BCT-B channel to a CATV network or any feeding coaxial system requires the use of a balun at the HNI (Home Network interface).

Figures E.1 through to E.4 illustrate the location where a balun can be found in a home (single dwelling).

NOTE By the use of baluns it is possible to run BCT applications via ICT permanent links in accordance with the manufacturer's instructions.

E.1.2 Baluns at the external network interface and baluns at the equipment interface toward the PHD

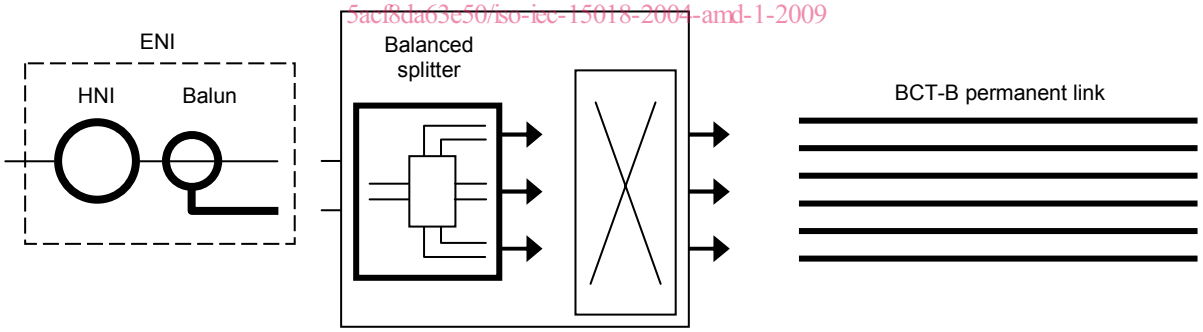

Figure E.1 – Balun at the ENI (External Network Interface)

Figure E.1 illustrates a configuration where the home is fed with a coaxial system. A balun is used to connect this coaxial system to balanced cabling including the Primary Home Distributor (PHD).

It is assumed that in this case the balun belongs to the application dependent equipment and therefore meets the application specific requirements to provide the home with signals complying with IEC 60728 (see Figure E.5 below).

If the balun cannot cover the frequency range of forward (47 MHz to 862 MHz) and return path (5 MHz to 65 MHz), two types of baluns should be used, each one in the appropriate path.

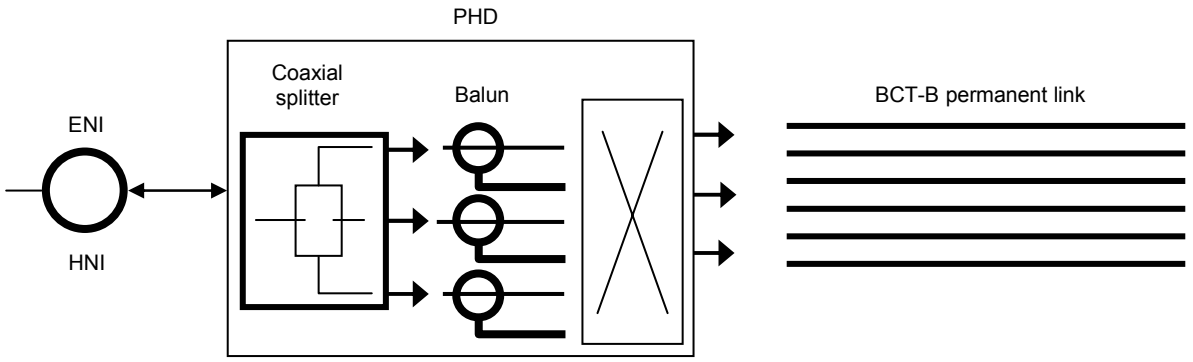

Figure E.2 – Baluns in the PHD (Primary Home Distributor)

Figure E.2 illustrates a configuration where the home is fed with a coaxial system. A balun is used to connect the coaxial system to the balanced Primary Home Distributor or directly to a balanced permanent link.

It is assumed that in this case the balun belongs to the application dependent equipment and therefore meets the application specific requirement to provide the balanced permanent link with signals complying with IEC 60728-1 (see Figure E.5 below).

If the balun cannot cover the frequency range of forward (47 MHz to 862 MHz) and return path (5 MHz to 65 MHz), two types of baluns should be used, each one in the appropriate path.

E.1.3 Baluns near or in the BO

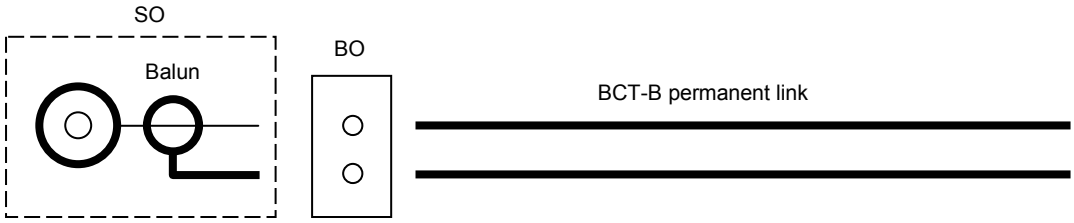

Figure E.3 – Balun built-in the system outlet (SO)

Figure E.3 illustrates the case where a balun is built into the wall outlet of the BO (only as an insert). In this case the unbalanced connector at the BO no longer exists though the permanent link shall meet the performance specified in Clause 9.

- When the input impedance is measured from the coaxial port of the balun it shall be 75 Ω ± 3 Ω.
- When RL test is performed from the coaxial port of the balun it shall meet 14 dB in the range 5 MHz to 42 MHz or 5 MHz to 65 MHz (return path), 12 dB in the range of VHF and UHF TV up to 470 MHz, 10 dB from 470 MHz to 862 MHz.
- The insertion of the balun shall not degrade the coupling attenuation as given in Table 3 (Minimum performance of BCT-B channels).
- The insertion of the balun shall not affect carrier to noise, and carrier to composite beat shall comply with IEC 60728-1.
- The insertion of the balun shall not induce a total sectional longitudinal slope (from the HNI to the coaxial port of the balun larger than the value given in Table E.1.

If the balun cannot cover the frequency range of forward (47 MHz to 862 MHz) and return path (5 MHz to 65 MHz), two types of baluns should be used, each one in the appropriate path.

E.1.4 Baluns in the cord between BO and the terminal equipment

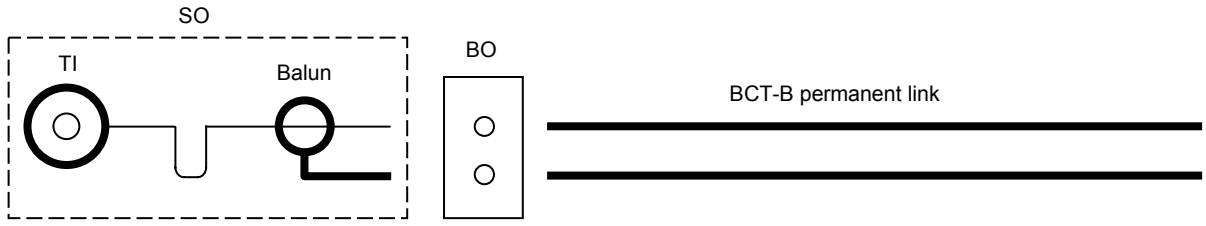

Figure E.4 – Balun in the cord between BO and the terminal equipment (TI: Terminal Input)

Figure E.4 illustrates the case where a balun is in the equipment cord.

- When the input impedance is measured from the coaxial port of the equipment cord it shall be 75 Ω ± 3 Ω.
- When RL test is performed from the coaxial port of the equipment cord it shall meet 14 dB in the range 5 MHz to 42 MHz or 5 MHz to 65 MHz (return path), 12 dB in the range of VHF and UHF TV up to 470 MHz, 10 dB from 470 MHz to 862 MHz.
- The insertion of the equipment cord shall not degrade the coupling attenuation as given in Table 3.
- The insertion of the equipment cord shall not affect carrier to noise, and carrier to composite beat shall comply with IEC 60728-1.
- The insertion of the equipment cord shall not induce a total sectional longitudinal slope (from the HNI to the coaxial port of the balun) larger than the value given in Table E.1.

If the balun cannot cover the frequency range of forward (47 MHz to 862 MHz) and return path (5 MHz to 65 MHz), two types of baluns should be used, each one in the appropriate path.

E.2 HNI

Figure E.5 illustrates the different types of HNI (Home Network Interface). Depending upon the type the allowed total insertion loss and sectional longitudinal slope are given in Table E.1.

NOTE This figure is an exerpt from IEC 60728-1, 7.1 (Figure 43 modified) to better understand the requirements of that standard.

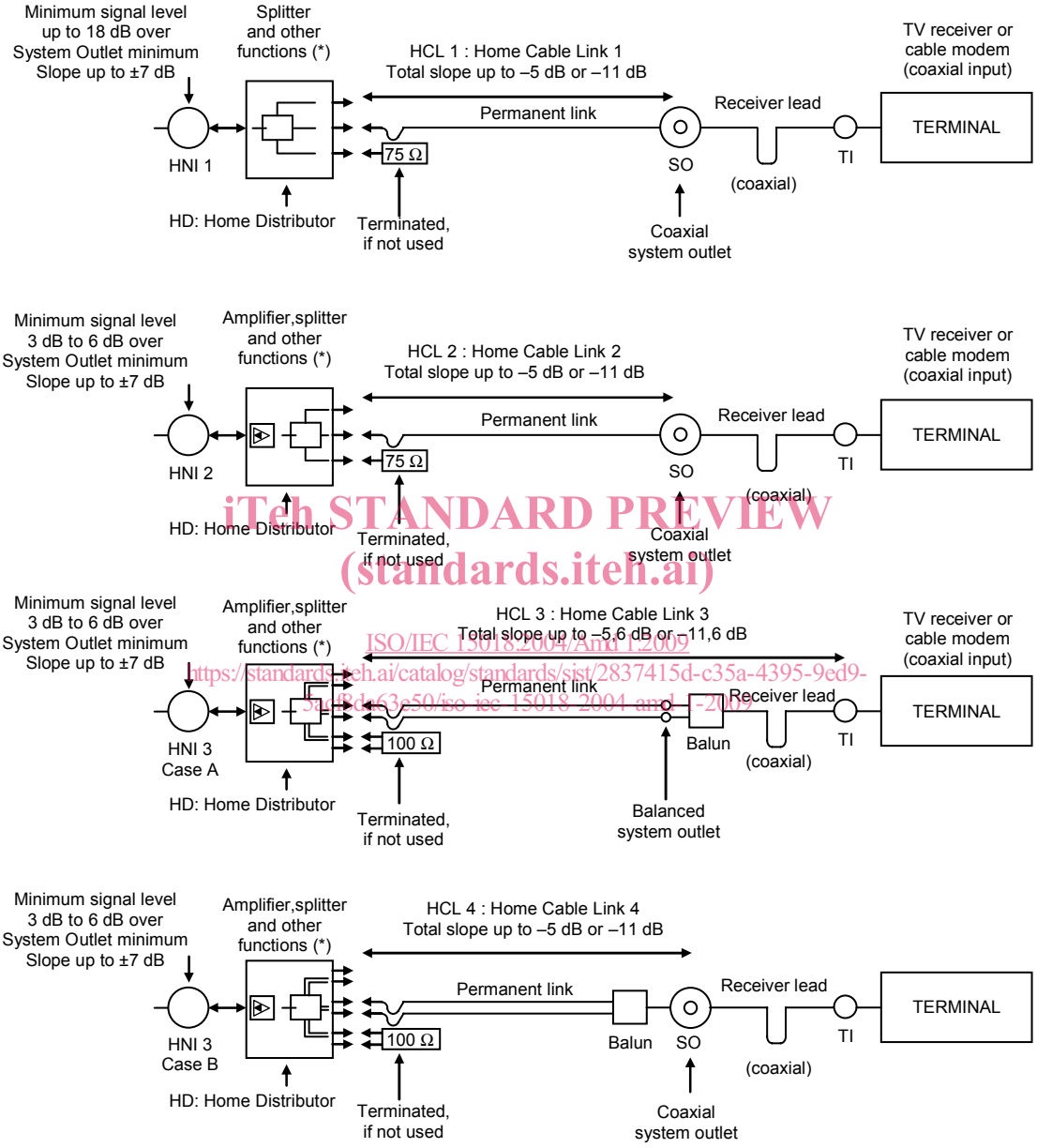

Figure E.5 – Types of HNI

Table E.1 – Insertion loss and total sectional slope

Type of HNI	Total insertion loss	Total sectional slope
HNI 1	See 60728-1	11 dB
HNI 2	See 60728-1	11 dB
HNI 3 Case A	See 60728-1	11,6 dB
HNI 3 Case B	See 60728-1	11 dB