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European Standard (Telecommunications series)

**Environmental Engineering (EE);
European telecommunication standard
for equipment practice;
Part 4: Engineering requirements for
subracks in miscellaneous racks and cabinets**



Reference

REN/EE-TMG006

Keywords

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Environmental Engineering (EE).

The present document is part 4 of a multi-part deliverable aimed at setting out, on a common basis, the engineering requirements for telecommunication practice, for housing equipment forming part of a public telecommunications network. EN 300 119-1 [2] is a general introduction and explains the terminology used. EN 300 119-2 [3] specifies the engineering requirements for racks and cabinets and EN 300 119-3 [4] specifies the engineering requirements for miscellaneous racks and cabinets. EN 300 119-5 [5] covers the preferred thermal management solutions for subracks, racks/cabinets and miscellaneous racks/cabinets installed indoors in restricted access locations, for the removal of heat dissipated by one or more subracks in a rack complying to the requirements of this multi-part standard. The present document specifies the engineering requirements for subracks mounted in miscellaneous racks and cabinets.

The present document applies to all telecommunications equipment forming part of the public telecommunications network.

Illustrative figures are contained in annex A.

The present document is part 4 of a multi-part deliverable. Full details of the entire series can be found in part 1 [2].

National transposition dates	
Date of adoption of this EN:	24 September 2004
Date of latest announcement of this EN (doa):	31 December 2004
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 June 2005
Date of withdrawal of any conflicting National Standard (dow):	30 June 2005

1 Scope

The present document details requirements for subracks for use in miscellaneous racks/cabinets, as described in EN 300 119-3 [4]. The subrack will normally be supplied as a fully assembled structure, unequipped, partially equipped or fully equipped with plug-in units, etc.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

- [1] Council Directive 89/336/EEC of 3 May 1989 on the approximation of the laws of the Member States relating to electromagnetic compatibility.
- [2] ETSI EN 300 119-1: "Environmental Engineering (EE); European telecommunication standard for equipment practice; Part 1: Introduction and terminology".
- [3] ETSI EN 300 119-2: "Environmental Engineering (EE); European telecommunication standard for equipment practice; Part 2: Engineering requirements for racks and cabinets".
- [4] ETSI EN 300 119-3: "Environmental Engineering (EE); European telecommunication standard for equipment practice; Part 3: Engineering requirements for miscellaneous racks and cabinets".
- [5] ETSI EN 300 119-5: "Environmental Engineering (EE); European telecommunication standard for equipment practice; Part 5: Thermal management".
- [6] IEC publication 60917-2-2: "Modular order for the development of mechanical structures for electronic equipment practices - Part 2: Sectional specification - Interface co-ordination dimensions for the 25 mm equipment practice - Section 2: Detail specification - Dimensions for subracks, chassis, backplanes, front panels and plug-in units".

3 Dimensions for subracks

The dimensions height H, width W and depth D1 and D2 of the equipped subrack shall include all plug-in units, switches, lamps, cooling fans, connectors, etc.

For a table of dimensions, see table 1 and refer to figures A.1 and A.2.

4 Accessibility

Subracks fitting in a miscellaneous rack/cabinet of depth 300 mm shall require access only from the front, so that they can be placed in miscellaneous racks/cabinets which are back to back or against a wall.

5 Weight

5.1 Unequipped subrack

Unequipped subracks shall have a maximum weight of 18 kg for safe handling. Supply of subracks exceeding 18 kg, if requested, shall be agreed between the supplier and user.

5.2 Equipped subrack

On demand, the supplier shall provide administrations, operators or customers with the total weight of the equipped subrack to enable the fully equipped miscellaneous rack/cabinet weight to be determined for telecommunications centres and customer site floor loading calculations.

6 Electromagnetic compatibility and electrostatic discharge requirements

Subracks to be installed in miscellaneous racks/cabinets must take account of the EEC Council Directive on the approximation of laws of the Member States relating to electromagnetic compatibility (Directive 89/336/EEC [1]). In accordance with the terms of this Directive, due regard shall be taken of the appropriate existing and emerging standards concerning electromagnetic compatibility phenomena.

NOTE: See also figures A.1 and A.2 where dimensions are in mm.

Table 1

Dimensions for subracks mounted in miscellaneous racks/cabinets	(see note 2)				
H = height	C	n x 25			
W1= overall width over flanges	C	535 (see note 1)		535	
W2= width	C	450		500	
W3= mounting centre distance	A	515 (see note 1)		515	
R = mounting position	C	12,5 + n x 25		12,5 + n x 25	
S = mounting pitch	A	n x 25		n x 25	
D1 = mounting depth (front)	C	rack 300 deep	rack 600 deep	rack 300 deep	rack 600 deep
		40	75	40	75
D2 = mounting depth (rear)	C	240	470	240	470
<p>NOTE 1: Subracks with dimensions W1 = 485 and W3 = 465 may be fitted into miscellaneous racks (EN 300 119-3 [4]) by the use of adaptors.</p> <p>NOTE 2: A = Actual dimension. Tolerances needed for W3 and S are specified in IEC 60917-2-2 [6]. C = Coordination dimension.</p> <p>NOTE 3: n = 0, 1, 2, 3, etc. (the value of n can be different for H, R and S).</p> <p>Definition: A coordination dimension is a reference dimension used to coordinate mechanical interfaces. This is not a manufacturing dimension with a tolerance. An aperture dimension is a special coordination dimension for a usable space between features. An actual outside dimension corresponding to a coordination dimension can only decrease. An actual inside dimension corresponding to an aperture dimension can only increase.</p>					

Annex A (informative): Illustrative figures

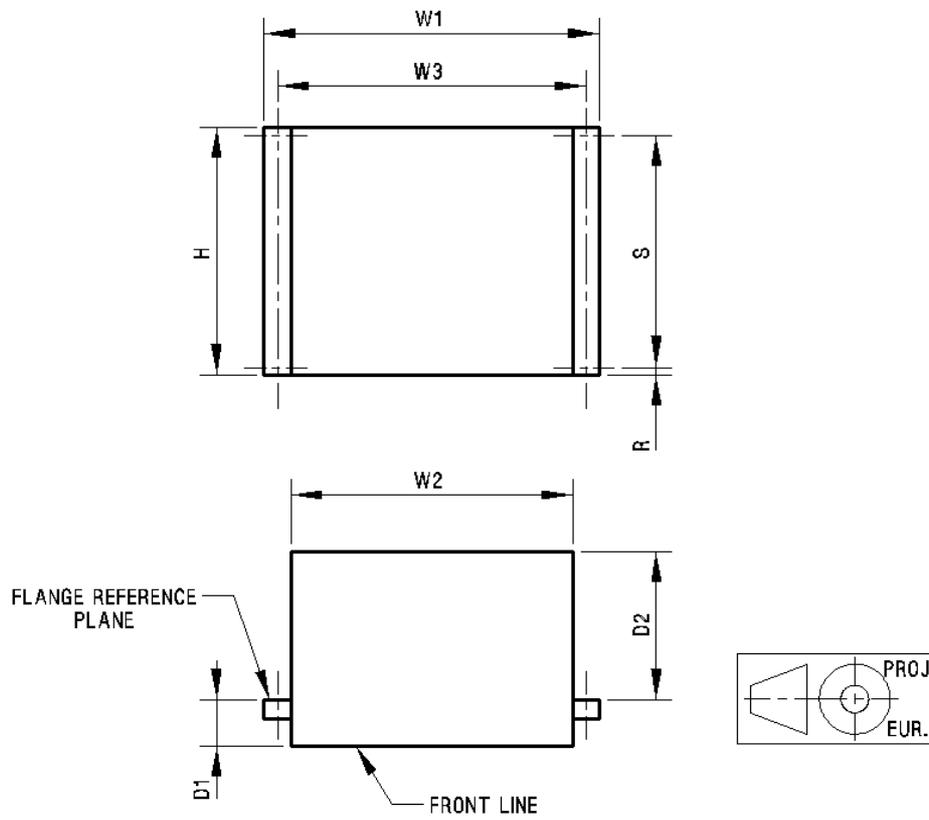


Figure A.1: Subrack

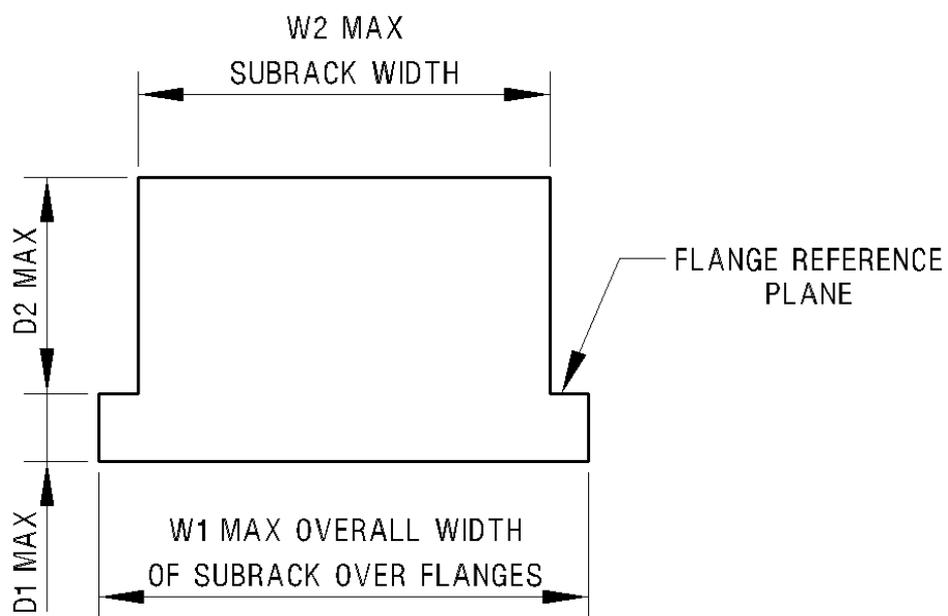


Figure A.2: Subrack

Annex B (informative): Bibliography

- ETSI EN 300 019: "Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment".

History

Document history		
Edition 1	January 1994	Publication as ETS 300 119-4
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