



IEC 62899-303-1

Edition 1.0 2018-05

# INTERNATIONAL STANDARD

---

**Printed electronics –  
Part 303-1: Equipment – Roll-to-roll printing – Mechanical dimensions**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

ICS 19.080; 37.100.10

ISBN 978-2-8322-5672-5

**Warning! Make sure that you obtained this publication from an authorized distributor.**

## CONTENTS

|   |   |
|---|---|
| FOREWORD.....   | 3 |
| INTRODUCTION.....   | 5 |
| 1 Scope.....  | 6 |
| 2 Normative references .....  | 6 |
| 3 Terms and definitions .....   | 6 |
| 4 Mechanical dimensions.....  | 6 |
| 4.1 General.....  | 6 |
| 4.2 Overview of printing equipment for printed electronics .....      | 7 |
| 4.3 Width .....   | 7 |
| 5 Example of the specifications of the printing equipment.....        | 8 |
| Annex A (informative) Mechanical dimensions (width and length) .....  | 9 |
| Figure 1 – Overview of R2R printing system .....                      | 7 |
| Figure 2 – Example of mechanical dimensions of printed web.....       | 8 |
| Figure A.1 – Example of mechanical dimensions (width and length)..... | 9 |
| Table 1 – Example of the specifications of printing equipment .....   | 8 |

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

---

PRINTED ELECTRONICS –**Part 303-1: Equipment – Roll-to-roll printing –  
Mechanical dimensions**

## FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62899-303-1 has been prepared by IEC technical committee 119:Printed Electronics.

The text of this International Standard is based on the following documents:

| FDIS         | Report on voting |
|--------------|------------------|
| 119/205/FDIS | 119/215/RVD      |

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

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62899 series, published under the general title *Printed electronics*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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

## INTRODUCTION

Printed electronics technologies have recently emerged from the trial stage to the actual commercialization of products based upon these technologies. In order to develop these technologies on an industrial scale, it is important to have industrial scale equipment to produce a big number of products. However, unlike other electronic products, this emerging printed electronics technology does not have any standard for the mechanical dimensions of the final product or devices.

‘Printing’ means generally ‘image printing’ or simply ‘print’. Printing has a long history of more than 1 000 years. Within that long history, international standards for industries, defining the size of paper and the input and output from the printing process, have been used to great effect. By having a standard for input and output, printing equipment could have a standard mechanical dimension, which would serve to avoid the complication of developing printing equipment to support unknown input or output size.

In order to follow that good practice, IEC TC 119 is introducing a document to establish standard mechanical dimensions of input and output from printed electronics equipment.

## **PRINTED ELECTRONICS –**

### **Part 303-1: Equipment – Roll-to-roll printing – Mechanical dimensions**

#### **1 Scope**

This part of IEC 62899 defines standard mechanical dimensions (especially related to the web size) of equipment for printed electronics. This document covers web-based printing equipment, but it can be used for sheet-based products.

#### **2 Normative references**

There are no normative references in this document.